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Vol. XIV. }

THE

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Vol. VI. }

ILLINOIS SCHOOLMASTER.

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AARON GOVE AND EDWIN C. HEWETT

EDITORS AND PROPRIETORS.

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STATE OF ILLINOIS.

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ELECTED NOV. 4, 1873, FOR FOUR YEARS.

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*Woodford,	William H. Gardner,	Panola.

* Re-elected.

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1873

THE CHICAGO SCHOOLMASTER.

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HOW MUCH?

Not exactly, "Shall the public schools teach more than the alphabet?" The sages in Springfield will ventilate that subject. But, yet, how large is the teacher's sphere? What is included in its circumference? How far out can he travel without passing its boundaries, and where can he pause and say, "I have reached the end; it is finished?"

The family, the school, the church and the state, are all alike for man, are meant to minister to human welfare. They work on the same general law, for the same general end. And, hence, these institutions are not to be regarded as rivals or antagonists, but rather as auxiliaries, each having a peculiar office, or performing a special service to the race, but combining to accomplish this result--the complete education of all who come under their influence, for life and the business of life. Though their forces are in some degree contemporaneous, that is, move on side by side, it is yet true that the child passes through the series from first to last, advancing from home to school, from the school to the church, and from the church to the state. Food, raiment and shelter are provided by the parent, intellectual culture by the teacher: the church regards religious interests, while the state attends to relations which exist between the individual and society. No strict division of labor can be made, however, so that any one of the four may wisely say, "This and this only is my affair, attend you to that and that." For though man is composed of parts, such as body, mind, sensibilities, will, which are distinct in idea, and unlike in some respects, he is yet as truly a unit, an organism, a living whole. The spiritual is in some sense an outgrowth

from the physical. The animal furnishes organs and opportunities for the intellectual. A diseased body sows the seeds of depravity and insanity. The fires of passion consume flesh and blood at length. Hence, though the teacher's special concern may be the culture of the brain, he must by no means forget his obligation to care for the eye, the ear, the hand, the stomach, the heart, the conscience of his pupils. Our schools, then, must fit our children to bear the burdens and accomplish the tasks of life, and do most for them in directions where they most lack.

BODY.—Work bestowed upon the animal part, the outer man, is primary and fundamental. Mistake or neglect in caring for this is likely to make good results next to impossible in other directions, for without a sound body we need not expect a sound head or sound heart or sound habits. It is all-important to the future welfare of the child that his respiration and digestion and circulation are kept in order, his nervous and muscular system are used without abuse, and that every sense is educated in due degree. Hence, the thermometer must be watched, and abundance of oxygen supplied. Habits of cleanliness and neatness are to be encouraged or even required, as well as a proper position for study. Physiology and hygiene are to be taught with special reference to their bearing on sanitary rules and conditions, to enable the child to understand and obey natural law in all matters of dress and diet and sleep and exercise, so that he may escape colds and colic and fever and rheumatism and consumption. It is the business of the teacher to see that physical vigor is not ruinously expended by secret vice, and especially that the brain is not overtasked. And, if health is failing, he is to see that the theater of activity is transferred from the head to the heels, that his pupil is remanded from study to rest and play, or to the physician's care. In the cases of precocious boys and girls, he teaches best who teaches nothing.

MANNERS.—While keeping a sharp lookout upon all matters relating to health, the wise teacher will not fail to bestow constant attention upon behavior. He will insist that in his presence at least, the instincts and impulses of the children manifest themselves decently and in order, that the feet, hands and tongue learn and practice decorum. He will put rudeness and vulgarity to shame, or else transform them into politeness and true refinement. Rules and customs prevalent in all good society will be maintained in the school room and on the play-ground. Systematic torment will be prepared for the unwashed and unkempt, the sluggard, the uncivil, the slouch, the boor. Nor will gracefulness of position and of movement, habits of promptness and accuracy, be forgotten. To multitudes discipline like this would be of far greater value, would minister far more to happiness and suc-

cess. than all the learning they could possibly get from books. Then, in order that he may bestow such a boon, let the teacher furnish a daily example of good manners.

MIND.—Not much need be said on this point, since the teacher is supposed to be competent and faithful, if at all, in training the intellectual powers. Somewhat he is to impart from himself and from the text-books, but much more he is to call forth from possibility to existence, from slumber to activity and growth, from germ to bud and blossom and fruit. Tilling, sowing and tending are his—among all the faculties, perception, memory, reason, imagination, that the child may come at length to know himself and his powers and his uses, and become skilled in the art of self-management and in the science of expending his energies to the noblest purpose with best assurance of success; or may learn how to think, how to remember, how to judge, how to speak, how to acquire, and how to bestow, that so he shall be fully equipped for every emergency, adequate to meet every demand and be master of every situation. This means immeasurably more than hearing lessons, going through the book, or even carrying a class to the end of graduating day.

MORALS.—Not mere morality—that is, abstinence from murder, thieving, profanity and the like—but including all that is contained in the idea of unselfishness, benevolence, sterling goodness, true manhood, a pure heart, a conscience sensitive but enlightened, reverence, obedience to parents and to law human and divine, true humility coupled with true self-confidence and courage,—a choice of truth and honesty deliberately made, and a hearty abomination of all that is mean, unmanly, degrading and despicable. The appetites of a healthy body, and much more of a diseased one, need to be ruled by reason, not only, but by a healthy moral sense as well, else the lower nature will usurp control. Nor less do the intellectual powers need to be tamed and tempered by love to God and love to man. If faith and reason be separated, they will surely soon fall into conflict, to the serious detriment of both. In like manner, if the one be strengthened by eight, ten, or fifteen years of study, while the other is dwarfed and dishonored by neglect, religious insensibility, unbelief and ungodliness, even to vice and crime, are the natural result. The atmosphere of the school-room should be religious in the best sense, that is, religious with all theologizing, sectarianism and cant excluded. We may have the real divine thing in great abundance without much mention of the name. Even if the letter of the New Testament be absent, or present only in a small degree, neither law nor custom, nor public sentiment is ever likely to endeavor to exclude the heavenly spirit of the volume. Here is a large field, by far too seldom traversed by the teacher,

for fostering all the virtues and graces of the christian life, and all that adorns or sweetens character, for checking all the impulses of ignorance and depravity, for removing all harshness and bitterness of speech; in short, for the complete culture of that charity on which hang all the law and the prophets, which suffereth long and is kind, which rejoiceth not in iniquity, but rejoiceth in the truth, beareth all things, believeth all things, hopeth all things, endureth all things.

According to this conception of things, teaching takes rank among the noblest and most difficult callings, is not inferior in honor and hope to the estate of the parent, the clergyman or the statesman. Even a three years' course of study in a normal school cannot supply a superabundance of preparation for responsibilities so mighty as these. And, judged by such a standard, how ludicrously, and yet how lamentably, some teachers (God knows how many) come short of fulfilling their mission.

D. L. LEONARD.

ARITHMETIC. I.

I propose this as the first of a series of short articles on Arithmetic, in which I shall try to present some of the leading principles of numbers and their use, together with suggestions in respect to oral exercises whose object shall be the development of these principles. In the outset, I wish to say to teachers of young children, *always use some objects for counters, in teaching numbers to little learners.* Another important point is this: *always regard the distinction between a figure and a number, in all the early stages of the work, at least.*

Let us suppose that we wish to present an exercise in numbers to the youngest learners; the object of the first is to get a clear knowledge of everything about the *one*, (I choose to say *one* rather than to say *unit*). Suppose the teacher holds a single book before the little class; let the question be, What do you see? Get a complete answer, "I see a book." How many do you see? Dwell on this question till the reply is, "I see one book." Now ask to have the word *one* made a strong word,—not "emphatic." When the answer is given to suit you, hold up, successively, several single articles, and require a similar answer, the word *one* always being a strong word. Now require the pupil to show you a *one* of some kind different from any you have shown. Continue this until a little thought is required to find a new *one*. Now let the word *one* be analyzed phonically; then let it be written or printed. Follow this with the figure 1. Perhaps two or three lessons will

be necessary to accomplish all this, for no teacher of little children should forget that an exercise of ten minutes is long enough. During the intervals between the lessons, the little pupils may employ themselves in writing the word and the figure on the slate or blackboard. See to it that this work is nicely done; and take such measures as will awaken a pride in nice work.

When ready to take another step, introduce it in some way like the following. Again hold one book before the pupils, and let them say, "I see *one* book." Now show another book, and get the same answer. Next, put the books together, and ask them what they see, forbidding them to use a new word in the answer. Get the reply, "I see *one* book and *one* book." Proceed in like manner with a few other objects; then let the pupils put together one and one for themselves. Now, proceed to get the word *two*, if you can, instead of *one and one*. Now inquire, What is two? Get the full answer, "Two is ~~one~~ one and one." Treat this new word as before, analyzing, writing, spelling, and making the figure. Every little pupil should now be furnished with counters; kernels of corn, beans or pebbles will answer. Now, in their leisure time, they may not only practice writing and making figures, but they may make many twos. In giving the phonic elements of this word, be careful about the vowel sound; it is very often wrongly given, not by children only. Let all the work be thoroughly and carefully done.

Now, after showing two books and one book successively, put them together, and ask, How many? Get the answer, "I see *two* books and *one* book." Proceed, just as before, giving the word three at the proper point. Let this work be continued day by day, taking the numbers in regular order, until all the numbers are mastered up to nine or even farther. The interest of the children will be kept wide awake, if the teacher is skillful in giving them a plenty to do, in analyzing the names, writing the words and figures, and making numbers with their counters. From time to time, show them groups of ones, and let them ascertain how many there are. For instance, if there are eight children in the class, show them four apples, let them find how many there are, writing the proper word and figure themselves; if this is done successfully, give them the apples as a reward. Other objects that children desire, as nuts, etc., may be used in the same way. In this work, you may begin to lead them to the very important distinction between a number itself and the name of the things represented. For instance, showing seven chestnuts, ask How many? Get the answer "Seven" without any name attached. Now ask, What? Use many such illustrations, until the words *How many* and *What* become very familiar. These words will not lose their force nor their value, at least until Percentage and Specific Gravity are mastered; that is, if I may judge from my own experience.

After many weeks, the work that we have gone over may be summed up in a series of questions and answers like the following :

What is two? Two is one and one. What is three? Three is two and one. What is four? Four is three and one, &c. Then by a little skillful management, we may generalize still further. How is each new number regularly made? By putting one of the same kind with the last preceding number. Let it be shown that the word "regularly" here means, in consecutive order, one after the other. Now, go further; What is putting one number with another, and naming the result called? Addition. What, then, have we been doing? Adding. How, then, are all numbers above one regularly made? By a constant addition of one. The last answer may not come without considerable effort and some illustration. I think, by this time, not before, we may draw out a definition of number. What is a number? One or a collection of ones of the same kind.

These exercises are simple, but they will take much time; and, if they are well conducted, the children being kept constantly at work, they will be very interesting. My aim is to show that a foundation thus laid, is safe to build the science of numbers upon. Subsequent articles will develop my idea.

E. C. HEWETT.

Dec. 7, 1872.

THE PROVINCE OF THE FREE SCHOOL.

Those who would limit the province of the Free School, admit the necessity of an education beyond the mere rudiments of Reading, Writing and Arithmetic, but they assume that private enterprise will supply this further need, and, at the same time, open the way for more direct religious teaching. This assumption is not sustained by the facts

England has for a long time had an abundance of well-endowed private schools. The English Government has recently extended the franchise. The most thoughtful Englishmen have studied this question of popular education most thoroughly, and their studies have led to the establishment of a Free School system. Their past experience has convinced them that through no other agency will the great need of popular intelligence be met.

The Southern States of this Union were for a long term of years dependent upon private enterprise for the means of an education. The census statistics have shown the results of such dependence. In both cases, free instruction has been tendered the poor to a limited extent; but the poor preferred entire ignorance to an acceptance of such distinctions.

The Japanese Government approves its purpose of progress by seeking

from among American educators one who shall organize for them a system of public instruction as extensive as the popular need.

For several years the Argentine Republic maintained in the United States a devoted student of our educational systems. So well satisfied were the people with his views and with his recommendation of the American Free School, that he has since been made their President by popular vote, and he is now carrying forward nobly the work which his observation here, coupled with a full knowledge of the wants of his people, has approved as best adapted to their particular need.

From both Continents comes the hearty endorsement of the Free School without limitation. Is it worth our while to shut our eyes to such light, and to turn our backs upon our own history, and cry, "Let us go backward"?

The system which thus far most nearly meets our wants has in its favor the still further condition of economy. In private enterprise it is impossible to unite all interests. An expenditure sufficient for the wants of many must be made, that a few may be attracted. All sects must battle for the ascendancy. Neither will be content to accept the provision made by any other. Hence, were it possible to provide for as full an education, and of as large a number of people as the Free School makes provision for, it must of necessity, through the influence of sect, be at largely increased expense. But, it is argued, the opportunity thus afforded for religious instruction will more than compensate for this increase of expense. It may be so for the few that avail themselves of the privileges thus secured; but what good shall result to the many who will not seek the advantages of such private tuition, even if able to do so, and to the still greater number who cannot afford the luxury, no matter how strong the will? Is it in accordance with the spirit of our institutions to say to such as have means and a good will, "You may come up into the higher field of culture, but the poor sons of less fortunate circumstances must be content with the merest rudiments." Is it not better to say, "The Government demands of you culture, that you may be worthy citizens; the Government opens the way to such culture through the Public School. All you can learn anywhere may be learned there, except only the peculiar tenets of sect or party, against instruction in which in the free school, the Government stands pledged. If you prefer to receive your education in secular matters at the hands of men of like faith with yourselves, and coupled with instruction in doctrine and religious faith, you will certainly be protected in your choice; but this right of choice does not carry with it the right to deny others equal privileges with yourselves, nor the right so to limit the Free School as to exclude from the advantages of a fair secular education the many who must depend upon the Government for the means to obtain it."

I can hardly believe that the advocates of limited Free School privileges fear the competition of the Free School, or that they find their only hope for the upbuilding of denominational schools in the ruin of the Free School; for though the Academies, and Seminaries, and Colleges, may not derive their patronage directly from the pupils of the Free School, they certainly find it of great importance to be located in the immediate vicinity of good public schools. General intelligence in a community is of incalculable advantage to private schools. The interest of the latter, therefore, seems to lie in the direction of a generous support of public instruction, and the advocates of denominational schools are generally wise men.

But to criticise more fully the articles alluded to at the outset, and admitting still the assumption that the Free School is irreligious is its tendency, is it wise to intrust to such influences the tender child, during the early years when impressions are so easily made? Is it true, that little danger may be feared during the first twelve years of a child's life from influences that must be positively resisted or counteracted thereafter? If I have read aright, if I have heard aright, such conclusions are not generally accepted by those who have made the child's mind a patient study. To be sure, home influences are stronger during these years; so, too, the instructions of the Church and the Sabbath School take a deeper hold upon the young heart. But it must be remembered that the conditions favoring such stronger influences, and such deeper impressions, obtain in the school as at home and in the church, so that the relative danger is as great at one time as at the other. Perhaps it is thought that there is nothing in the studies of this earlier period that can in any manner exert an influence upon the religious character of the child. He may read, write and cipher without affecting in the least the impressions made in the home and in the church. But what shall be done all this while with the inquisitive spirit of the child? Shall his numberless queries be laid aside, to be answered only after he shall have left the Free School, or shall his spirit of inquiry be crushed beyond recovery? Then again, if what he reads is to have no influence over his young heart, it must be limited to repetition of words, conveying no meaning whatever to his mind. Such reading is certainly senseless, and no sane man could for a moment favor it. What the child reads at school, and what he reads at home through the ability gained at school, will have more influence upon his life than all the higher studies combined can have.

He then who can safely trust his younger child to the Free School need not fear for its influence upon the elder.

The Home—the School—the Church,—each has its appropriate place in the culture of the young. They may be made mutually helpful, and yet

neither interfere with the province of the other. It is certainly unwise to say that since the school may not do the work of the church, it must therefore be crippled in its possibilities.

J. L. PICKARD.

SCHOOL LAW OF ILLINOIS.

1. *The School Month.*—The 54th section of the new school law provides that "the school month shall comprise twenty-two school days actually taught."

Saturdays and Sundays are not "school days." In a year there are one hundred and four Saturdays and Sundays; leaving 261 school or teaching days. One-twelfth of two hundred and sixty-one is twenty-one and three-fourths. Hence there is not an average of twenty-two school days in each of the twelve calendar months of the year, and it is not to be supposed that the legislature intended to require teachers to teach either Saturdays or Sundays, and to make up the lack of twenty-two school days in any given calendar month, from the school days of the succeeding month. In most of the respective months there are twenty-two school days, but not in all. If a teacher teaches all the school days in any entire calendar month, or all the school days from a given date in any month to the same date in the next succeeding month, he will comply with the intent and meaning of the law. These instructions apply where teachers are employed for a certain number of months, at so much per month, and nothing is said in the agreement or contract as to the number of days that shall be taught for a month. In other words, in the absence of any special agreement or contract on the subject, the legal month, as above defined and explained, is to be understood.

But the definition of "school month" in section 54, refers mainly to the word "month" as used in sections 43 and 48. The chief object is to fix and determine the number of days of actual teaching necessary to entitle a district to its proportion of the public funds. In this respect, the definition of "month" in section 54 must be strictly construed. Every district must have at least one hundred and ten days of actual teaching, each year. So that this necessary condition is complied with, directors and teachers may enter into any agreement or contract that they choose, with regard to the number of days that shall be taught for a month, and in respect to holidays, etc. Directors may pay their teachers by the term, by the month, or even by the

week or day, if they see fit; and may enter into any agreement they choose in respect to vacations, holidays, etc., but must see to it that at least one hundred and ten days are actually taught during each and every school year.

Hence the importance of a full understanding beforehand, between teachers and directors. There should always be a written agreement, signed in duplicate by both parties, in which every material point and condition shall be specified. Teachers who omit this simple and reasonable precaution, have only themselves to blame if they get into trouble about their time and pay.

2 *Holidays*—Section 54 further provides "that teachers shall not be required to teach on legal holidays, thanksgiving or fast days appointed by State or national authority."

The "legal holidays," in this State, are the first day of January, commonly called New Year's day; the fourth day of July; the twenty-fifth day of December, commonly called Christmas day; and any day appointed or recommended by the governor of this State, or by the president of the United States, as a day of fast or thanksgiving. [Gross's Statutes, 3d edition, page 463, § 15.

Note, that only New Year's day, and Christmas day, are legal holidays, not the week between, also, as was allowed in the old school law. Teachers may close their schools on each and all of said legal holidays; no order or permission from the directors or boards of education is required. If there was no previous agreement to the contrary, the days so lost must be made up, in accordance with the instructions of the first part of this circular, if so required by the directors. But by previous agreement, or subsequent consent of directors, teachers may be allowed the holidays, without loss of time or pay, as previously stated.

3. *Prior Contracts*.—Agreements and contracts duly made and executed between teachers and directors, previous to the first day of July, 1872, may lawfully be fulfilled and carried out by the contracting parties, in good faith, and in accordance with the spirit and letter thereof.

4. *County Teachers' Institutes*.—The old school law contained the following:

"When a teachers' institute is held in a county, school directors shall allow their teachers to attend such institute, if they desire to attend, and no reduction of pay or loss of time shall be incurred by the teachers so attending, for the number of days during which they were in actual attendance upon such institute, as certified by the county superintendent of schools: *Provided*, That when such institute is held during a term of school, such leave of absence shall not be granted more than once during any one period of six months, nor for more than one week at any one time."

Teachers, and all others interested, are hereby informed that the above provision is repealed. The law now in force contains no such provision.

5. *Unexpired Certificates.*—It is held that teachers' certificates granted prior to July 1, 1872, are valid for the time specified therein: but in no case can such certificates be *renewed*, (except as provisional certificates,) without a satisfactory examination in the additional branches now required by law

NEWTON BATEMAN,

Sup't of Pub. Inst.

WHAT AND HOW BEFORE WHY.

Many of these who now constitute the class called veteran teachers remember the stir created in their young days by the advent of some "master" or "mistress," who required pupils to *explain* the processes of arithmetic and the meaning of words in the selections read. The writer has not forgotten the sensations created in his own mind when called to stand before the square yard of blackboard (till then an unknown apparatus in our sixteen-foot school-house) and explain the process of subtraction! He had "ciphered through" Roswell C. Smith's Arithmetic, had become familiar with certain problems in "Adams's Old" and "Adams's New," and was accounted proficient in "Emerson's Third Part." His shame at being put to work on one of the "simple rules," at the age of fourteen, by a miss of seventeen, gave way to satisfaction at being thought worthy to attempt what he had never seen done; and the gratification was increased when he considered that the clear view to which he was led by the enthusiastic young teacher was due to the new star whose rising the Bay State was then observing with such deep interest—the first normal school in America. "Why?" "Can you explain that to me?" "What does this mean?" Such soon became the familiar demands of our young and pains taking disciple of Father Pierce.

From that time, my observation of modes of teaching may have been somewhat minute. Certain it is, that I soon heard of here and there a teacher who "made the scholars give the reasons." Warren Colburn's little arithmetic was already in use, and, in the hands of judicious teachers, became a valuable auxiliary toward what seems, at this distance of time, to have been a great reform.

Children "ciphered" less, talked less of "doing sums" and "getting the answers." They began to use the new familiar phrases, "analyzing the problem," "solving the example." In reading, the practice of "defining" a word by naming one or two of its synonyms—these synonyms, perchance, farther from the child's thought than the word first given—was superseded or supplemented by paraphrasing the sentence read. The younger pupils were

asked to give, in their own language, the story or description which they had studied and were about to read.

Looking back over a third of a century, I am disposed to think that this prying into the meaning of words, phrases, and processes must have seemed to others, as to me, a new dispensation.

And what do we see to-day? Truly these analyses are occasionally as formal and traditional as were the old methods by rule: the analytical reasoning, though uttered, is not always felt, and thus "the answers" come as magically as of old. All the varieties—the old dull ways and the ways so full of freshness, the plodding "cipherer through" and the analyzer, proud of his skill to disentangle, the memorizer and he who understands—all these are in the schools of Illinois. It may be that every school supplies something approximating the best, and something suggesting the worst that our minds ever picture or recall.

That there is a clearer apprehension of principles than in the olden time, there can be no doubt. To ask the reason for a step is wise; long to rest content with a form of words, or a mere following of a rule, is a mark of indolence and stagnation. And yet, *we do not enough insist on gaining facility in the rendering of facts and in the use of processes.* An evil of undeserved good fame is this: the pressing of pupils, especially in written arithmetic, to assign reasons for the more difficult fundamental processes, before they have yet acquired any facility in doing the work. Let it be observed, first, that to subtract, multiply, and divide are proper employments for young minds—fit, I mean, as being adapted to their powers. The labor is not too heavy—assuming, of course, that the requisite tables have been mastered. With not a few children, the reasons for the steps involved may well be called difficult. Besides, so far as regards the mass of children, to whom the privileges of school are continued but a few years, the fit marshaling of figures is of more consequence than the philosophy of steps. Of no less import to the teacher is the consideration that to be insisting at all stages, that the child shall thoroughly understand the reasons, is itself an unphilosophical position. Consider: the child can not be eager to know the relations of things till he knows the things themselves,—can not care much about the reasons for steps that are so difficult as still to absorb all his energies in the taking. Of course, the result at best is a kind of forced culture.

Of like indiscretion comes the too early effort to teach cancellation and short methods of multiplying and dividing. Let the common, the universally practicable method be given, practiced, made familiar, mastered: the exhilaration induced by speed on the old road will, in due time, beget sufficient excitement and interest, to make the mind appreciative of "short cuts" and

incidental "best ways." Should the pupil's school opportunities be prolonged beyond what is usual with the great mass, this facility with processes, this ready knowledge of facts and of the forms of words—acquisitions gained not without some stir of the child's inquisitive nature—will form the best possible foundation for the work of fuller logical and philosophical investigation. "Present the object before giving the name," say the wise counselors. Is it not equally wise to withhold, in the primary stage of written efforts in numbers, the philosophical presentation of reasons which the child has neither sought, nor even reached the requisite strength fully to comprehend?

Do not be betrayed into the belief that your teaching lacks thoroughness because you do not present every point in all its relations. Thoroughness is exemplified no less truly in the making of a horseshoe nail, than in the researches into the climatic and physiological relations which induce the horse distemper.

If each pupil of your little class in Geography has been led to pronounce clearly and promptly, whenever you call, the names of the New England States, you and they have done so much thorough work. Doubtless the names should also be spelled, written with appropriate capitals; for thus you enhance the value of the former acquisition. But each work is a unit, and the first is thoroughly done when the clearly formed ideal is realized.

The multiplication table is thoroughly learned—however irrational and irksome the means—if the pupil can give, without hesitation, the product of any two numbers below thirteen; and this too, notwithstanding he may not see *why* eight 9's should equal twelve 6's,—may, indeed, never have noticed that "72" comes twice in the table.

One thing at a time; and first that which is near at hand, obvious, simple. Nor need we suppose that, to be thorough, the thing philosophically related must *immediately* follow. Not necessarily at one lesson come the desert of Atacama and the philosophy of rains; rather, it may be, the location, at many lessons, of hundreds of terrestrial features, continents, oceans, islands, mountains, and rivers,—the fixing of these in their local relations, the little workers being aided meanwhile, by stories, pictures and conversations (subsidiary, and hence not too numerous), that the things may be made real through an adequately vivid conception.

Do we not in the instruction of children at school, as in their home acquaintance with dress and etiquette, present the nicer and more refined facts and distinctions too soon?

If we will but be content wholly to defer, not only the logic of technical grammar, but the study and practice of such facts, processes, and

principles involved in the other "common branches" as appear to lie beyond the present appreciation or probable needs of the pupils, can we not find time to consider in our schools many of the leading features of Physiology, Botany, Zoology, and Natural Philosophy? If so, we shall find a partial solution of the difficult problem thrust upon us by our recent legislation.

THOMAS METCALF.

KEEP THE CHILDREN HAPPY.

In creating the world, God seems to have made many things for the express purpose of making His creatures happy. Flowers, singing birds, the love of music, the beautiful tints of the sunset clouds, the joy of loving and being loved, all seem formed for the express pleasure of man.

Now, let us imagine ourselves shut up, away from these delights, for a certain period, and prevented from either seeing or *thinking* of them. How should we feel? Not happy, of course.

Take from our homes all that renders them attractive, and the place would soon become loathsome to us. Yet we think nothing of sending the dear little children, whose feelings are just as acute, and whose perceptions of beauty are more delicate than ours, to be immured six hours a day in the dreariest place, oftentimes, that can be found—to be tortured by one who cares nothing for them, and who only sees in his or her task, bread, butter and clothes. No wonder children dislike to study, and consider the bell for dismissal "the merriest sound in the world."

All over the land there are springing up noble, costly school-houses. Still, all the house is worth is what it contains; and if this house, despite its cost, feels and looks prison-like, the little ones are sure to know it.

Long ago, a teacher of wide experience said to me, "Keep the children happy, and the rod, the sharp word and reproof, on your part, will be needless; and the child will, unknown to itself, be learning the best of lessons."

How shall we keep the children happy? In many ways. The state of childhood is one of constant activity and inquiry. Give this activity a vent, this spirit of inquiry some reply. Feed the child's mind with love of beauty and truth. Never chide nor repress the desire to know and learn. If he asks some question not pertaining to the task you have set him you may not tell him, as I have known teachers to do, "that is not in your lesson." Fill you school-houses with pictures and flowers and everything that makes our *homes* lovely. Read to them, tell them stories and facts, and they will soon desire to do the same for themselves. Let them feel that

they come from the *home* where their bodies are clothed and fed, to the *home* where their minds are to be filled with the good, the true, and the beautiful.

Let the children have an interest in all these things, and no more dull looks, cross words nor unlearned lessons will vex you. A child *naturally* wants to learn, and it is only from the unnatural, unhappy state into which he is forced six long hours for five long days, that he does not.

Try, then, by your own actions, your words and surroundings, to make and keep the children happy. This may seem like a task, but it more than repays, in the order, the ardor and the love which it begets. MRS. P.

VILLAGE AND CITY SCHOOLS. IV.

The duties of the superintendents of schools do not differ in principle from the duties of superintendents of industrial establishments.

The head of the school, in order to be very effective, must be familiar with the detailed workings of each part of the system, however remote that part may be from him. He should have quite definite notions of the amount of work that pupils of certain ages and grades ought to do; this necessitates, as our schools are at present, a familiarity with all the text-books in use in his schools, from the lowest primary to the high school—an acquisition by no means easy. Many young teachers are much aided by having a definite work set before them for the month or the term; older and more experienced teachers do not so much need this. The principal is the one to assign these tasks; it is evident that it cannot be intelligently done without an excellent knowledge of the text-books. It is easier to make a reasonable assignment for the work of seven years than for one year, so more judgment is required in allotting tasks to be accomplished in shorter time.

If, during the present vacation, a principal should prepare a written statement of the work he desires to be accomplished by each teacher—complete and minute—and at the commencement of the term hand to each teacher the paper that related to her work, with the request that she transcribe a copy, and return the original to him; if at the end of the term he should go to that teacher's room with this paper in hand, and hear each class recite anywhere and everywhere from the term's lessons, both principal and teacher would be enabled to judge of the manner in which the time has been spent. If at this examination the principal takes careful notes of the working and *status* of each class, talks with the teacher from these notes, lays out the work for the next term, and at *that* examination compares his former notes with those he may take then—if this experiment should be tried, I should be disappointed if the results did not appear very encouraging. Principals

need to dive down deep into details, to watch and work up the thousand little defects; the school, as a whole, will then show itself improved. It should always be remembered, however, that in this business, time, much time, is required to produce brilliant results.

The principal should be able to answer questions relating to class work and methods. Assistant teachers have an impression that that is no small part of his business. They think that he is paid, not only to supervise, but to assist them over hard places, to tell them how to overcome the apparent stupidity of a class, to suggest a flank movement in the case of some contumacious pupil. They have a right to this notion. It is a true one. A juiceless, dried-up principal is not a pleasant associate for the wide-awake and lively girls that throng our teachers' institutes, and that are now doing better class drill work than has ever before been done in the Mississippi Valley.

The amount of academic instruction to be given to teachers ought to be expressed by zero. It ought not to be necessary to spend time with teachers in doing that which they are supposed to have done before obtaining a certificate to teach. If they are not proficient in the branches they are expected to teach, there are two courses for them: to go back to school and *look up*, or go to their rooms and *read up*. It is a mistake to turn teachers' meetings into high schools and academies. Time is too valuable. My next paper shall speak of teachers' meetings.

AARON GOVE.

TABLE SHOWING THE RANK AND POPULATION, BY THE LAST CENSUS, OF TEN CITIES IN EACH OF SIX OF THE N. W. STATES.

ILLINOIS.		INDIANA.		IOWA.	
1. Chicago,.....	298,977	1. Indianapolis,.....	48,244	1. Davenport,.....	20,038
2. Quincy,.....	24,052	2. Evansville,.....	21,830	2. Dubuque,.....	18,434
3. Peoria,.....	22,849	3. Fort Wayne,.....	17,718	3. Burlington,.....	14,930
4. Springfield,.....	17,364	4. Terre Haute,.....	16,103	4. Keokuk,.....	12,766
5. Bloomington, ..	14,590	5. New Albany,.....	15,396	5. Des Moines,.....	12,035
6. Aurora,.....	11,162	6. Lafayette,.....	13,506	6. Council Bluffs,...	10,020
7. Rockford,.....	11,049	7. Madison,.....	10,709	7. Muscatine,.....	6,718
8. Galesburg,.....	10,158	8. Richmond,.....	9,445	8. Clinton,.....	6,129
9. Jacksonville,....	9,203	9. Logansport,.....	8,950	9. Cedar Rapids,...	5,940
10. Alton,.....	8,665	10. Jeffersonville,....	7,254	10. Iowa City,.....	5,914
MISSOURI.		MICHIGAN.		WISCONSIN.	
1. St. Louis,.....	310,864	1. Detroit,.....	79,577	1. Milwaukee,....	71,440
2. Kansas City,....	32,260	2. Grand Rapids,...	16,507	2. Fond du Lac,....	12,764
3. St. Joseph,.....	19,565	3. Jackson,.....	11,447	3. Oshkosh,.....	12,663
4. Hannibal,.....	10,125	4. East Saginaw,....	11,350	4. Racine,.....	9,880
5. Lexington,.....	6,336	5. Kalamazoo,.....	10,447	5. Madison,.....	9,176
6. St. Charles,.....	5,570	6. Adrian,.....	8,438	6. Janesville,.....	8,789
7. Springfield,.....	5,555	7. Saginaw,.....	7,460	7. La Crosse,.....	7,785
8. Calumet,.....	5,185	8. Ann Arbor,.....	7,303	8. Watertown,.....	5,364
9. Sedalia,.....	4,560	9. Bay City,.....	7,064	9. Sheboygan,.....	5,310
10. Jefferson City,.,	4,420	10. Muskegon,.....	6,002	10. Manitowoc,.....	5,168

EDITORS' DEPARTMENT.

Again, we come to the first number of a new volume. We have been reading our editorial of one year ago. In that, we expressed certain hopes; they have, in a good degree, been realized. We asked our patrons and friends to help us; their aid has been most generous. We made certain promises and pledges for the SCHOOLMASTER; we feel that we have not been false to our promises. How quickly has the year passed! How much of good, and how little of evil, it has brought to us, to our country, to the world! And, now, as we pause a moment at the mile-stone, as we look backward and forward, what of the future? It is hopeful for all of us; education has made good progress during the past year, and its outlook is good for the year to come. True, there have been things to discourage; now and then, there have been severe criticisms on this school and that, on this or that method of instruction; there have been direct attacks here and there on our whole public school system; there have not been wanting prophets of disaster in the future. But how has the good predominated over the evil! And, for the future, we are quite sure that we can say to teachers, there is nothing *outside of the school-room* that friends of free schools and sound learning need to fear. If we do our work well, everything is safe. But, teachers, how are we doing our work? How much have we gained in the year, how much increase in our own knowledge and powers, how much better can we teach our pupils, how much better help them to build sound and upright character? What have we read, pertaining directly to our work, or outside of it, that was worth reading? And how much have we digested, assimilated and retained of what we have read? How much have we gained from our study of nature? How much have we grown in right living? And what are our plans for the new year? What work for ourselves have we laid out? What new resolutions for good have we formed, and how strong is the probability that they will be kept? It is a time for careful thought. Does some one say all this is common-place. True—so are air and sunshine, life and love, dread and death. All we most love, and all we most fear, is common place; take out of life and thought what is common-place, and how much of value is left?

For the SCHOOLMASTER, the year has been, on the whole, one of prosperity and cheer; and the future is bright with hope. Words of commendation and encouragement have come to us from far and near; and they have been almost unmingled with adverse criticism and censure. To be sure, it has sometimes been intimated that our magazine is chiefly an advertising medium. We have just two things to say about this: first, we are proud of our advertising patrons, and of our advertising pages; second, the advertisements have in no case, been suffered to trench on our pages of reading matter. Not only are our advertisements themselves of value to the teachers; but they will never be allowed to diminish the amount of other reading. We have few promises to make for the coming year; our course in the past is our type and guaranty for the future; only, we shall try to do still better, and where we have made mistakes we hope to be wiser in time to come. We remember that our readers include teachers of every class, from the college professor and city superintendent, down to the young girl teaching her first school by the

country roadside. We shall endeavor, in every number, to have something suited to the wants of each. With many thanks to our patrons and friends for past favors, we confidently look for favors in the future; and, to all earnest workers in the field of learning and education, we heartily wish "A Happy New Year."

We hope every teacher has read the *President's Message*; it is a sensible, business document of moderate length. To be sure, as it comes to us, we observe some errors in style and composition; but we have no means of knowing what part to charge to the writer, and what to the telegraph. The President says that there is not now "a shadow upon our friendly relations," with England; and he hopes they may remain thus unclouded forever. He says further:

"With France—our earliest ally, Russia—the constant and steady friend of the United States, Germany—with whose government and people we have so many causes of friendship and so many common sympathies, and the other powers of Europe, our relations are happily on the most friendly terms."

In speaking of the unhappy civil contest in Cuba, he says:

"I cannot doubt that the continued maintenance of slavery in Cuba is among the strongest inducements to the continuance of this strife. A terrible wrong is the natural cause of a terrible evil. The abolition of slavery and the introduction of other reforms in the administration of the government in Cuba, could not fail to advance the restoration of peace and order. It is especially to be hoped that the present liberal government of Spain will voluntarily adopt this view. * * * * I regret to believe that citizens of the United States, or those claiming to be such, are large holders in Cuba of what is there claimed as property, but which is forbidden and denounced by laws of the United States. They are thus, in defiance of the spirit of our own laws, contributing to the continuance of this distressing and sickening contest."

The President recommends the supporting of at least four American youths both in China and Japan, and the adoption of the postal telegraph, in much the same language as in his last message. The total receipts of the Government for last year were \$374,106,837.56; the total amount of debt paid, \$99,960,253.54; the total reduction of the debt since March 1, 1869 has been \$363,696,999.87. He recommends that measures be taken to bring our currency up to par; he urges the improvement of our navy; he advocates the abolition of the franking privilege, or at least a reduction of its abuses; he says the Indian policy "has been as successful as its most ardent friends anticipated;" he urges the civil service reform; he desires some course to be taken with Utah, "which will secure peace, the equality of all citizens before the law, and the ultimate extinguishment of polygamy." In relation to education he uses the following language:

"The rapidly increasing interest in education is a most encouraging feature in current history of the country, and it is no doubt true that this is due in great measure to the efforts of the bureau of education. That office is continually receiving evidences which abundantly prove its efficiency from the various institutions of learning and educators of all kinds throughout the country. The report of commissioner contains a vast amount of educational details of great interest. A bill now pending before Congress, providing for the apportionment of a part of the proceeds of the sales of public lands for educational purposes, to aid the States in the general education of their rising generation, is a measure of such great importance to our real progress, and is so unanimously approved by the leading friends of education, that it is commended to the favorable attention of Congress."

And he commends the Centennial celebration of our independence in 1876.

We will give the name, publishers and price of every book that is sent us for that purpose. We will give more extended notices and reviews of such books as we choose, indicating what we regard as merits or defects. This we shall do in a perfectly independent manner; well knowing that otherwise our notices will be of no value either to our readers or to the publishers. We shall be obliged to publishers if, when they send us books for notice, they will name the price.

Prof. Hewett has prepared a table of the ten largest cities in each of six of the north-western states. The *SCHOOLMASTER* presents it in this number. It will bear close examination, and then some of the examiners will be surprised to learn the relative size of familiar cities to be quite different from what they had supposed. It is a part of the *SCHOOLMASTER*'s mission to present practical work; this table is a specimen of what is meant by practical work. If teachers will learn it, then teach it to their classes, it will be good for both.

The unexpected death of Horace Greeley, on the 29th of November, has given rise to a very wide expression of opinion by the periodical press of the country. Mr. Greeley, as the candidate of a political party for the highest office in the land,—and a party so peculiarly constituted as his,—received of course most bitter opposition. His foibles, his weaknesses and his mistakes were all set forth, often in severe language; and not unfrequently, he was made the butt of ridicule and caricature. This may not be the most dignified way of carrying on a Presidential campaign: but it seems that most of our politicians regard it as effective. Since Mr. Greeley's death, however, almost all the papers speak of him in terms of eulogy; and many of the loudest words of praise come from pens that were lately writing of him in quite another style. This fact is taken as a text by many editors; and from it, they preach long sermons against the bitterness with which candidates for office are assailed, and charge those who speak so differently now from what they did three months ago, with inconsistency, to call it by no harder name. The old proverb, "Nothing unless good of the dead," is more honored in the breach than in the observance; and Antony's declaration, that

"The evil that men do lives after them,

The good is often interred with their bones,"

is as far from candor and truth as the rest of his speech. Any editor who spoke what he believed untruth about Horace Greeley while he lived, ought to be ashamed of it, but no more so than if Mr. Greeley were still living. And any one who now speaks in praise of him more than he believes to be true ought to be ashamed of it, and none the less so because he is dead. Mr. Greeley was doubtless industrious, energetic, kindhearted, influential, and one of the ablest editors America ever produced. But he might be all this and more, and yet be notoriously unfit for President. Those who held this view did right to oppose him; and, if they said no more than the truth, they have nothing they ought to take back; neither are they justly blamed when, now that he is gone, they publish his good qualities, provided only that they still speak the truth.

Berlin gets 2,400 American Newspapers, daily.

EDUCATIONAL INTELLIGENCE.

REPORT OF ATTENDANCE FOR NOVEMBER, 1872.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
St. Louis	26,647	50	22,235	20,660	93	6,159	.....	W. T. Harris.
Chicago, Ill.....	30,236	20	27,592	26,204	95	8,444	.....	J. L. Pickard.
Cincinnati, O.....	23,842	25	21,798	20,814	95-5	7,656	.....	John Hancock.
Indianapolis, Ind.....	6,626	19	6,044	5,684	94-1	1,593	2,423	A. C. Shortridge.
Evansville, Ind.....	3,903	20	3,557	3,253	93	1,483	716	Alex. M. Gow.
Dubuque, Iowa.....	2,760	20	2,628	2,171	83	.....	.....	Thos. Hardie, Sec'y.
Peoria, Ill.....	2,325	18	2,191	2,089	95-3	217	.....	J. E. Dow.
Springfield, Ill.....	2,289	.....	2,020	1,953	96-7	253	.....	Jas. C. Bennett.
Terre Haute, Ind.....	2,493	20	2,320	2,188	94-3	1,021	847	Wm. H. Wiley.
Burlington, Iowa .....	.....	.....	.....	.....	.....	.....	.....	Wm. M. Bryant.
Decatur, Ill.....	1,556	18	1,443	1,360	94-1	200	745	E. A. Gastman.
West Des Moines, Ia ...	1,231	18	1,102	1,003	91-1	1,084	261	J. H. Thompson.
Freeport, Ill.....	1,311	.....	1,176	1,109	94-4	308	.....	Chas. C. Snyder.
West and South }	1,127	20	1,026	952	92	248	384	{ J. H. Blodgett.
Rockford, Ill., } .....	.....	.....	.....	.....	.....	.....	.....	{ O. F. Barbour.
Darville, Ill.....	1,053	24	909	793	87-2	415	229	J. G. Shedd.
Alton, Ill.....	981	17	844	780	92-4	328	291	E. A. Haight.
Lincoln, Ill.....	950	20	710	638	85-9	510	463	Israel Wilkinson.
Ottumwa, Iowa.....	792	19	653	613	94	226	196	L. M. Hastings.
Pekin, Ill.....	709	18	733	667	91	163	253	Geo. Colvin.
Centralia, Ill.....	682	20	610	576	95-4	344	225	W. D. Hall.
Marsaliltown, Iowa ...	624	14	572	548	96	68	388	Chas. Robinson.
East Denver, Colorado.	605	20	564	506	89-8	546	122	F. C. Garbutt.
Cedar Falls, Iowa.....	584	15	548	489	89-3	314	173	J. K. Sweeney.
Macomb, Ill.....	.....	.....	.....	.....	.....	.....	.....	Matthew Andrew.
Wabash, Ind.....	595	20	557	521	93-5	5	248	J. J. Mills.
Princeton, Ill.....	591	20	556	537	96-4	98	278	C. P. Snow.
Peru, Ind.....	.....	.....	.....	.....	.....	.....	.....	Geo. G. Manning.
Allegan, Mich.....	539	20	464	398	85	180	.....	Albert Jennings.
Shelbyville, Ill.....	568	23	491	393	80	182	80	Jephthah Hobbs.
Polo, Ill.....	528	19	474	446	94	35	228	J. H. Freeman.
Dixon, Ill.....	.....	.....	.....	.....	.....	.....	.....	E. C. Smith.
Princeton, Ind.....	19	.....	470	431	91-7	68	157	D. Eckley Hunter.
Chas. City, Iowa.....	469	20	436	391	89-6	413	98	Irwin Shepard.
Rushville.....	432	19	389	373	96-4	100	164	J. M. Coyner.
Winterset, Iowa.....	432	.....	.....	.....	.....	.....	.....	Henry C. Cox.
Marengo, Iowa.....	392	15	367	337	92-7	75	180	C. P. Rogers.
Seymour, Ind.....	.....	.....	.....	.....	.....	.....	.....	John W. Caldwell.
Sigourney, Iowa.....	387	19	357	335	93	286	14	Ambrose Updegraff.
West Mendota, Ill.....	.....	.....	.....	.....	.....	.....	.....	A. J. Seymour.
Noblesville, Ind.....	.....	.....	.....	.....	.....	.....	.....	Jas. Baldwin.
East Mendota, Ill.....	377	19	345	329	95-2	185	142	J. R. McGregor.
Albia.....	363	19	350	335	95-8	97	140	Cyrus Cook.
Carrollton, Ill.....	.....	.....	.....	.....	.....	.....	.....	E. A. Doolittle.
Normal, Ill.....	361	20	316	294	93	98	115	Aaron Gove.
Rochelle, Ill.....	334	20	316	304	96-2	34	173	P. R. Walker.
Henry, Ill.....	311	19	279	256	91	138	86	J. S. McClung.
Rochester, Ind.....	.....	.....	.....	.....	.....	.....	.....	Lafe Bryan.
Lexington, Ill.....	.....	.....	.....	.....	.....	.....	.....	Daniel J. Poor.
Rockville, Ind.....	.....	.....	.....	.....	.....	.....	.....	D. H. Pennewill.
Attica, Ind.....	.....	.....	.....	.....	.....	.....	.....	M. A. Barrett.
DeKalb, Ill.....	253	19	229	217	94	84	76	Etta S. Dunbar.
Sheffield, Ill.....	238	20	225	207	92	68	81	J. A. Mercer.
Blue Island, Ill.....	201	18	195	188	93	42	.....	M. L. Seymour.
North Dixon, Ill.....	198	18	185	163	88	244	51	J. V. Thomas.
Maroa, Ill.....	.....	.....	.....	.....	.....	.....	.....	Jas. Kirk.
Yates City, Ill.....	.....	.....	.....	.....	.....	.....	.....	A. C. Bloomer.
Vernon, Ind.....	181	18	149	129	86	49	44	R. W. Wood.
Lyndon, Ill.....	122	19	120	98	86	59	30	O. M. Cray.
Earlham, Iowa.....	90	15	80	75	94-2	43	22	J. W. Johnson.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

The rules by which the preceding table is computed are herewith presented. The same will be found on the blank reports furnished by the SCHOOLMASTER to all applicants. The *Illinois Society of School Principals* after due deliberation, has adopted these; since their adoption several other systems have been published, differing but little. Will our friends preserve this for reference, and be careful that the reports conform

1.—The ages of all pupils shall be taken in years and months, immediately upon their entering school.

2.—Every pupil upon entering the school, prepared with books and other requisites for performing his work, shall be enrolled as a member of the school, and the record of every pupil so enrolled, shall be preserved, and shall enter into and form a part of the record of the school, whether he be a member for one day, one week, or for an entire term.

3.—Every pupil who shall have been in attendance during half or more than half of a given session, shall be accounted present for that session; otherwise he shall be accounted absent.

4.—The name of any pupil who shall have been absent five consecutive days for sickness, shall be dropped from the roll; and the name of any who shall have been absent for three consecutive days for unknown cause, or for other cause than sickness, shall be dropped from the roll as soon as the teacher has positive knowledge that he has left and does not intend to return.

5.—No record of attendance shall be kept for any half day, unless the schools shall have been in session for at least one-half of the half day.

6.—Any pupil that shall be absent from the school-room at a definite time previously fixed for the beginning of the session shall be marked tardy; except in case where a pupil, after having been present in the school-room shall be sent by the teacher, into other parts of the school-building, or upon the school-premises, to attend to business connected with the school.

7.—The average number belonging shall be found by dividing the whole number of days of MEMBERSHIP by the number of days of school.

8.—The average daily attendance shall be found by dividing the whole number of days PRESENT by the number of days of school.

9.—The per cent. of attendance shall be found by dividing one hundred times the average daily attendance by the average number belonging.

CHICAGO.—A few gentlemen who consider falsehood and philanthropy synonymous terms, tried, during the past month, to make for themselves a little cheap notoriety by discussing, in print, that very interesting theme, "The Public Schools of Chicago." In this they have been aided by the Bohemians, who, now that the election campaign is over, are hard pressed for a subject on which to exercise their addled brains.

It is a notable fact that, in all the charges of cruelty to children, made by fanatics and sensationalists, against the teachers of Chicago, the accusations are found only in the head-lines, while the body of each article that details the circumstances of the case is a tribute to the kindness and efficiency of the teachers. Such facts betray the practice of the artful dodgers of the press, who employ men of some little sense to write their articles, and assign to one lunatic the task of putting heads on them, without any reference to the subject matter of the discourse.

The truth is that in no other city are teachers so kind and attentive to the wants of children as in Chicago. They are harbored before 8 o'clock a. m., when sent to school by their parents "to get them out of the house." They are watched with argus eyes lest they go out for a moment without being properly wrapped. And teachers and principals lie awake at night, planning how to direct children to and from school so as to prevent them from "dashing their foot against a stone."

The net results of a newspaper sensational article on the public schools may be stated as follows; "What a ridiculous story!" said by 517 lady teachers. "The penny-aliners are at it again!" said by 31 principals. "Another scoop!" said by 19 hungry reporters. Impatient remarks made by twenty-one parents who are "taken in" by the sharp newspaper dodge. Seven children made insolent and ungovernable thereby, and promptly suspended from school. "Tally another against Storey!" said by Beelzebub

down below. "Can't do it, master, his slate is full!" said by the clerk of the infernal establishment. Whereupon all is quiet again. What other city has teachers who, though not forbidden the use of the rod, manage thirty thousand children without striking a blow? And, as for letting children in every morning, we have never yet been able to reach school so early as not to find pupils in the building; and human ingenuity fails to drive them away in the afternoon. We more than suspect that some of them remain there all night.

As to making children study at home, we must plead guilty to this charge. Doubtless, the president of the Humane Society would object to their studying at all. Bye and bye we shall be able to invent a process by which we can make children learn without studying.

At the last meeting of the Board of Education, Mr. Pickard showed the pressing need of several new school-buildings. It is to be hoped that the Board will take immediate action thereupon. The Ogden school opened on the first of December, with six hundred scholars. The Franklin school has under its roof just twice as many scholars as it is able to accommodate. The above statement will be a good problem for some of the arithmetical readers of the SCHOOLMASTER.

The reading in our schools is improving by the strictness with which we adhere to phonic analysis. But phonic spelling—writing words according to sound, and not with the proper orthography—is entirely discarded.

The attention which our public schools are receiving on every hand, is encouraging in the extreme. There is no other subject, not even business, or the state of the money market, that receives so much thought. This is encouraging. We are glad, too, to learn of those who can teach us what we ought to do; but they ought, at least, to see the inside of a school building once, before they essay to write on the subject of common school education.

At the last principals' meeting, Mr. Pickard, as the result of his visit to Cincinnati, drew a parallel between the schools of that city and those of Chicago. We sum up his conclusions as follows: They have the departmental method in classes corresponding to our grammar grades, a teacher attending to a special branch in several divisions. Their discipline does not suffer thereby. Their reading and writing are superior to ours. Their system is more rigid, promotions taking place but once a year through examinations arranged by the superintendent. Recitations are changed at signals called "bells," according to a programme made by the principal. In this way, the individuality of the teacher is all but crushed out. Judging by Mr. Pickard's statements, German is too prominent an element of common-school instruction in Cincinnati. The school-buildings are badly supplied with windows, and made gloomier still by the color in which the walls and ceilings are painted. Drawing, music and penmanship have special instructors. The teachers, as a whole, are above the average—quite equal to those in Chicago. Here we may ask, why can they not entrust to each principal the examination of classes in his own school? The idea of making a grammar or primary pupil wait a year in a grade, without a second trial if he fails in an examination, would be scouted in Chicago. Compared with Cincinnati, we have much to learn; and she has much to unlearn.

MISSOURI.—The teachers of the Seventh Congressional District, held a convention at Sedalia, beginning on the 20th of November. Among the names of the prominent workers present, we observe those of State Superintendent, Monteith, President Jobonnot, and other teachers of the Warrensburg Normal School, Maj. J. B. Merwin of St. Louis, and R. P. Rider, Esq., formerly of Litchfield, Ill. A full and interesting report of the meeting is given in the *Sedalia Times*.

The *Pettis County Teachers' Institute* held its session. We perceive by the report, that Miss Helen M. Wadleigh, a graduate of the Illinois Normal, was Secretary of the Institute; Misses Julia and Minnie Chapple, also students formerly in the same institution, took a prominent part. Both of the above-mentioned meetings seem to have been characterized by an earnest, intelligent spirit, which indicates thorough work.

St. Louis.—As a fitting conclusion to the popular Convention in behalf of education, held during the year in different parts of the State, and at the invitation of

the Board of Directors of the St. Louis public schools, and the St. Louis Teachers' Association, a convention met in St. Louis on Thursday, Friday and Saturday, Dec. 12th, 13th, 14th. The SCHOOLMASTER had the pleasure of attending the sessions during Saturday, and is sure that the character of the essays read, and the spirit and ability of the participants are such as to prohibit any retrograde movement in the free-schools of Missouri. No city in the Union pretends to have an abler superintendent than W. T. Harris. No one has received more merited compliments from the scholars and thinkers of the land. His address at the convention on "The Public School as an Institution of Civil Society and the State" was printed *verbatim* in the daily papers of the city. The ablest essay, to our mind, on Saturday, was that of H. H. Morgan, principal of the high school, on the "Functions of the Thinker in Education." Mr. Morgan can write cutting, scathing, but deserved criticisms with a severity seldom equaled, but in a manner with which those who wince most, cannot take offence. We wish the *animus* of his paper could be infused deeply into the spirit of every member of the profession. Prof. James Johonnot, principal of the Warrensburg Normal School, read a paper which was enthusiastically received. Some of the errors mentioned in the conduct of schools, seemed to us to be of the past; our best schools have ceased committing many of the blunders stated by him to be the cause of waste. Our Western friends who have heard much of Prof. Johonnot (many Illinois teachers do not need an introduction) since his return from the East to a Western home, will be glad to know something of his appearance. He seemed to us to be the nearest our ideal of a modern schoolmaster of any man whom we have ever met. Physically of fine form, large stature, with a bright, pleasant, gray eye, iron gray hair and beard, and a countenance expressing decision, yet indicative of goodness, in dress and manner polite yet not fastidious, a pleasant voice and vivacious style, he presents to the casual observer just the man whom one would select to head a troop of boys and girls, to direct them, to teach them, and at the same time to keep them happy. Missouri has made another valuable acquisition to her able schoolmasters in the man Prof. Johonnot. No paper of merely ordinary merit was read in our hearing during the meeting. Prof. Davidson proclaimed the maturity of a scheme for furnishing the profession with educational literature, that meets our approval; we shall take pains to place it before our readers at an early day. No one discovery has so dampening an effect upon the reading teacher as that which sooner or later he must inevitably make, of finding that a majority of all the ideas and plans put forth for reforms are but repetitions of sayings and doings of former times. The consolation given by Rev. J. C. Learned is the only comfort we have heard:—that our progress may not be a circular but a spiral movement. The placing of the writings of eminent pedagogues in a cheap and convenient form, issued as a serial, is the gist of Prof. Davidson's plan. We left St. Louis impressed with the eminent scholarship of St. Louis teachers, not accompanied with arrogant, egotistic, pedantic display, but with that true modesty that ever is found with merit. Mr. Harris has consented to be at Springfield at the Ill. Teachers' Association meeting to open the discussion on Pres. Edwards's paper.

COLORADO.—*East Denver*, which commands a view of nearly two hundred miles of the Rocky Mountains, including also, part of Snowy Range and Pike's, Long's and Grey's Peaks, has erected and will soon occupy a \$50,000 school-building. It contains ten rooms, besides an assembly hall and two recitation rooms, and will accommodate six hundred pupils. It will have the most approved heating and ventilating apparatus, and all the conveniences that a liberal and judicious Board can provide.

MASSACHUSETTS.—*Harvard College* lost more than \$200,000 by the great Boston fire; over \$100,000 has already been subscribed to cover the loss. It might be thought that Harvard being the wealthiest of all our colleges could bear this loss with little inconvenience; but, as the income of each parcel of property is devoted to a specific purpose, it turns out that several important professorships must be unfilled, or filled without salary, unless the loss of this property can speedily be made up. President Eliot states that by careful estimate, each of the undergraduates for the last two years has cost the College about \$100 per year in excess of all moneys that he has paid to the Institution; so, even the richest students of old Harvard are *de facto* *paupers*.

IOWA.—*Wapello County* Institute met at Ottumwa, Dec. 2. Superintendent Ives presided. Eighty-six teachers were enrolled the first day. The work was genuine and earnest. Among the wide-awake teachers we notice the names Baker, Caldwell, Dungan, Samson, Gilbert, Emma Parks, Graves, Wright, Hastings and Peck. The proceedings are reported at length in the *Courier* to which we are indebted for our account.

ILLINOIS.—*St. Clair Co.*—We learn from the *Belleville Dem.*, some particulars of the annual Institute held on the third week of November. The number in attendance was 146, a slight falling off from last year; most of the exercises were conducted by W. H. V. Raymond, O. S. Westcott and Dr. Robert Allyn; the report speaks in high terms of these gentlemen, and of the exercises; the interest of the meeting is said to have increased to the end. James P. Slade, Esq., the efficient county superintendent, was President of the Institute. We learn from this report, that the venerable George Bunsen has died during the year; few men in Illinois have been more earnest advocates for sound primary education than Mr. Bunsen; and he continued his work earnestly to the end; well do we remember his prompt attendance, and his earnest interest in the institute only one year ago.

Shelby County.—The *Shelby County Union* speaks very highly of two entertainments given recently by the pupils of the Shelbyville High School, under the charge of Prof. Hobbs. The net profits were about \$90.00.

—Died, in Shelbyville, Sunday, Nov. 24, of Erysipelas, Anthony T. Hall, for fifteen years a member of the Shelby County Bar, and for seven years county superintendent of schools. He was a very successful and popular lawyer, a kind, obliging and faithful superintendent, ever ready to advise and encourage the teachers under his charge; an earnest and zealous worker in whatever he undertook, an obliging neighbor, and an honest and faithful citizen. In him, Shelby county has lost one of her noblest sons. H.

Grundy County Institute met at Morris, Oct. 14 and closed Oct. 31, devoting sixteen days to the study of the new branches, and vocal music. Lectures by Pres. Edwards and Dr. Sewall, of Normal, E. A. Gastman, of Decatur, O. S. Westcott, of Chicago, N. C. Dougherty and C. D. Armstrong, of Morris. The Institute was under the supervision of the county superintendent. The following resolutions were adopted:

Resolved, 1. That we, the members of this Institute, return our sincere and hearty thanks to the following gentlemen who have given their time and valuable assistance to the advancement of the cause of education by their able instruction during the present session of this institute, namely: Pres. Edwards and Dr. Sewall, of State Normal University; O. S. Westcott, of Chicago, and E. A. Gastman, superintendent of public schools, Decatur.

2. That Prof. Dougherty, C. D. Armstrong, Prof. H. H. C. Miller, and Judge Hopkins of this city, are particularly deserving of our thanks, on account of their continued efforts on our behalf.

3. That our county superintendent, H. C. Gould, is entitled to a hearty expression of our gratitude for the faithful and energetic manner in which he has conducted this institute.

FRANCIS A. MURPHY, Secretary.

Kane County Institute was eminently a success. There was more than an average of intelligence and enthusiasm manifested. With the exception of the exercises of Mr. Town, Mr. Snow and Miss ———, the work upon the programme was performed. Of Mr. Powell's Animal Lessons, you are already informed. They were good. Mr. Hall's lessons were of great practical value to the teachers present. In Compound and Denominate Numbers, they were illustrated with a miniature lumber yard, surveyor's chain, etc., etc. In Philosophy, many very interesting experiments were performed. Botany was very fully presented and the subject profusely illustrated, by Miss Clement of Elgin high-school. The human skeleton, a manikin, charts, etc., illustrated the subject of Physiology and Hygiene. Prof. Cumnock's and Rev. W. A. Bartlett's evening exercises were very well received indeed. Thursday and Friday afternoons, the teachers enjoyed themselves in visiting the Watch Factory, Insane Asylum, and the Front Park. All present agreed in pronouncing the Institute one of the most profitable gatherings

held in this county for a long time. From the opening address of the county superintendent we take the following items:

Kane county stands *fifth* in the State for liberality of expenditure in behalf of public schools, including school buildings and teachers' salaries. Money is a vital force. Cost is a condition of success and progress. We are bound to render an equivalent and to meet our obligations. Perhaps we are doing, as teachers, all that is required in the mental training of pupils, and possibly are overdoing memory culture. But we are to care for something beside intellectual growth. True living, which is highest usefulness, requires of our pupils more than mere facts or isolated knowledge. Our methods of teaching may be improved and made to accord more fully with the laws of mental development, and thus better prepare pupils for the discipline and duties of life. Study mental science and the philosophy of education; but approved methods of training intellect will not suffice. Our responsibility has a wider scope. Perfected character and efficient manhood demand a broader culture. * * * * * The teachers in the rural districts are earnest laborers; the village schools have successful teachers, and the river towns, as a class, have schools excelled by none in the State. Dundee has taken an advance step, and proposes soon to rank with the best in the county. Remember your own calm, competent Kimball and his corps of able assistants. Going southward, we find at St. Charles the energetic Downing and the accomplished Mann; Geneva presents the experienced Sawyer and pleasant Town; Batavia can boast of the unique Snow and the reliable Twining; and Aurora is satisfied with her enthusiastic scientist, Hall, and her logical, literary Powell.

Crawford County.—SUGGESTION.—Let the law be so amended as to have three grades of certificates.

The *third* grade to be granted to persons of good moral character, who are qualified to teach orthography, reading in English, penmanship, modern geography, arithmetic and English grammar. Valid in the county for one year. Not renewable.

The *second* grade to be granted to persons, who in addition to the requirements of the third grade, are qualified to teach physiology and the history of the United States. Valid in the county for eighteen months. Renewable.

The *first* grade to be granted to persons who in addition to the above requirements are qualified to teach algebra and the elements of botany, zoology and natural philosophy. Valid in the county for two years. Renewable.

The person who is qualified to teach the six branches required in the third grade could teach many of the schools; but if not well qualified, ought to be rejected. Make the grade on the number of branches taught; not on different qualifications in the same branch. Let the applicant be examined as thoroughly in the branches of the third grade as in the same branches in the other grades. "As the twig is bent the tree inclines."

SAMUEL A. BURNER, County Sup't.

McLean County.—Mr. John Hull, county superintendent, held a local institute at Heyworth, commencing the 5th and ending the 6th of December. The first day's work was conducted by local teachers, assisted by Mr. Hull. The second day the principal part of the work was conducted by Prof. J. W. Cook, of Normal, a man of energy and ability, and an enthusiastic worker in the cause of education.

J. A. WILLIAMS, Sec.

The Springfield Teachers' Institute met on the 7th of December in the high-school building at 9 a. m. The superintendent, Mr. J. C. Bennett, then occupied some time in bringing before the teachers such matters as required immediate attention. The teachers were directed to see that the pupils were allowed to enter the buildings at an early hour in cold weather. Some discussion arose on this point, one member contending that it was enough if the building was opened according to the rules. The superintendent urged the importance of making the study of grammar more practical, attending more carefully to punctuation, the proper use of capital letters, sentence-making, etc. He gave it as his opinion, that some of the teachers in the upper grades assisted the pupils too much. He believed in making the pupil self-reliant. These topics were discussed by Messrs. Bennett, Brooks and Sampson. Mr. A. M. Gardner, principal of the 4th Ward School, gave a class exercise in Written Arithmetic, over twenty pupils from his room reciting. The drill was upon decimal fractions and proportion. The questions were first solved on the board, and then the explanations were called for. The strict attention of each pupil was obtained, as the scholars were liable to be called at any stage of the explanation. The definitions were clearly and promptly given and the

exercise was both profitable and interesting. Penmanship was then presented by Mr. Chas. F. Willcutt, principal of the 3d Ward School. The pupils of the different schools will be drilled during the month of December on the 9th principle, as found in W. V., &c. Prof. Lompe then addressed the Institute, comparing the schools of England and Germany. He claimed that much of the teaching, particularly in young ladies' schools, is very superficial. He gave some statistics showing the gross ignorance of the masses, the marriage register in one of the London churches proving that 75 per cent of the names attached to that document required the use of the cross, the parties being unable to write. Finally he showed that the English had been driven by the force of events to adopt a system of compulsory education. The subject of drawing was again taken up. Mr. Willcutt claimed that by writing on Monday, Wednesday and Friday, and drawing on the other two days, his pupils would advance in writing, and also make good progress in drawing, as the branches are of the same nature, and the culture required in each is identical. He showed that teachers need a knowledge of this subject for black-board illustration, that persons of almost every profession would be benefited by an acquaintance with the elements of drawing, and that the idea that this branch is a mere accomplishment had been exploded. Messrs. Willcutt, Brooks, and Gardner were appointed on a committee to secure music for the State Association. The Institute then adjourned to meet on the 2d Saturday of January.

Illinois Museum of Natural History.—The officers of the State Museum of Natural History take this method of calling attention to the collections under their care. These have now been thoroughly arranged and organized with special reference to the convenience of students; and large additions have been made to the library, both of general scientific works and of those containing descriptions of species.

Mineralogy, geology, conchology, botany and ornithology are represented by full and valuable cabinets, and measures have been taken to enlarge the already respectable collections in entomology and general zoology. The chemical laboratory connected with the Normal University will soon be refitted and supplied with abundant apparatus, and will be opened to all who wish to make a special study of chemistry and the allied branches.

Named sets of specimens will be supplied to schools and public institutions as fast as possible; and to this end, contributions are solicited from all parts of the State. For the sake of more exactly defining what is required, it may be said that any of the following objects will be acceptable: 1—Minerals, rocks, petrifications and fossils. 2—Shells, land and water. 3—Insects, snakes, turtles, lizards and fishes. 4—Birds and their nests or eggs. 5—Bones or skins of animals. 6—Pressed plants, seeds and seed-vessels, woods, mosses, lichens, and fungi.

The Museum is for the free use of the people of Illinois, and every needed facility and assistance, in the way of books, specimens and instructions, will be afforded those who wish to avail themselves of it in studying our Natural History.

It is believed that nothing is now needed but the zealous cooperation of the friends of education to make this one of the most efficient educational forces in the State.

Normal, Ill., Nov. 15, 1872.

S. A. FORBES, Curator Museum.

An Explanation.—When the "Course of Study, etc., for Ungraded District Schools," published and distributed as Circular No. 22 from this department, was issued, I did not know that Mr. I. F. Kleckner, county superintendent of schools for Stephenson county, was the author of the paper. And it is now due to the parties concerned, and to the public, to say that the name of Oscar F. McKim, of the committee of revision and publication, was attached on my sole responsibility. He had no knowledge of the use of his name in the connection, till he saw it in print. As the document, with instructions as to printing, etc., was received from Mr. McKim, acting in behalf of the committee mentioned, it seemed, at the time, right and proper that his name should be attached. But as I seem to have erred, this announcement is made, that honor may be given where honor is due.

The following statement, from Mr. McKim, may be of interest; it will be seen that he does not wish even to seem to appropriate the honor due another:

"The true history of the case is about as follows: At our meeting at Rock Island,

a committee was appointed to prepare said "Course"—said committee consisting of Col. Smith, of Whiteside, Slade, of St. Clair, and Kleckner, of Stephenson. The work seemed to devolve upon Mr. Kleckner, who prepared and read the report. The report was referred to a committee to revise programme—said committee consisting of Slade, Hull and myself. We reported a new programme, and also recommended a general revision before publication. The "Course" was then adopted, and referred to the latter committee for revision, the work of which devolved upon myself. The general plan is Mr. Kleckner's, and to him the credit belongs. It is true, I took liberties with the original—re-arranged, added some, omitted some—but my work was only that of a reviser."

NEWTON BATEMAN,
Supt. of Pub. Inst.

Springfield, Ill., Nov. 19, 1872.

ILLINOIS NORMAL.

At the close of the term on the 11th of December occurred the annual contest meeting of the Wrightonian and Philadelphian societies. The large hall was full. The question was stated as follows: *Resolved*, That it would *not* be wise for the State of Illinois to pass a law compelling all persons between the ages of seven and sixteen years, not otherwise well instructed, to attend school for at least four months in each year, or for an equivalent amount of time. J. Dickey Templeton and Felix B. Tait appeared for the affirmative. Dewitt C. Roberts and E. R. E. Kimbrough for the Wrightonians. The decision was rendered in favor of the Wrightonians. Miss Libbie Peers of the Philadelphian, and Miss Anna Hughes of the Wrightonian, contested for the society honors in instrumental music. The Philadelphian society won. The *Ladies' Garland* was read by Misses Amelia H. Kellogg and Mary Hawley. The *Oleastellus* was read by Misses Nellie S. Edwards and Emma V. Stewart. The judges gave the victory to the *Oleastellus*. The vocal music of each society was represented by a quartette—tenor, alto, soprano and base. The Wrightonian Quartette was pronounced by the judges the better. The fact is that the music of the evening was not so good as that often heard in the usual society meetings. Walter C. Lockwood was the Philadelphian orator—J. W. Smith, the Wrightonian. The latter oration was awarded the victory. The Judges of debate, papers and orations were Hon. R. M. Benjamin, Dr. T. F. Worrell and Rev. E. R. Sanborn. The judges of music were F. A. Baller, Esq., Prof. R. R. Trench and Mr. J. W. Whipp. Admirable selections it seemed to us. Now, how about the decisions; Everybody ought to be, if not pleased, at least satisfied; we believe they are. Probably no other three in the hall would have marked precisely the same as did these gentlemen. It is no easy task nicely to judge of the merits of productions upon which so much time and thought are spent. The truth is that these contest papers are now of so high an order of merit, that it is an honor to take part—much greater than the honor of receiving the favorable decision of a board of judges. The speech of Mr. Templeton alone contained more "boiled down" argument than one sometimes hears in an evening's lecture. The pleasure of the closing week was saddened by the death of a beloved and noble student. Hiram A. Stewart died at his boarding house, after a brief illness, on December 7th. The remains was taken to his home near Polo, Ill., for interment.

Resolutions.—WHEREAS, The hand of death has recently removed from us a beloved member of our school, Hiram A. Stewart, we, the faculty and students of Illinois Normal University do adopt the following resolutions:

1st. That, while we humbly bow in submission to this dispensation of an allwise Providence we deeply deplore the sad event that takes from each of us a dear friend, from our school an earnest successful student, from the cause of education a strong and worthy supporter, and from our country one of its most promising and noble young men.

2d. That we will long retain as a precious legacy the memory of his mental abilities, both natural and those acquired by assiduous application, which gave promise of extended usefulness; while the remembrance of the faithfulness of his tried friendship, his earnestness in whatever seemed the duty of the hour, his integrity which scorned subterfuge or conceit, in a

word, of the many virtues that made up his noble christian character shall ever be in our hearts green as the sod that shall grow above him.

3d. That we most earnestly sympathise with the relatives of our departed associate in this our common bereavement.

4th. That these resolutions be published in the CHICAGO SCHOOLMASTER and the *Illinois Teacher* and a copy be sent to the family of the deceased.

HENRY McCORMICK, MINNIE M. COX, LIEBIE W. PEERS, JASIER N. WILKINSON,	} Committee.
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Luke Hite—all the students of 1858-9 remember Luke—is elected to the Illinois House of Representatives for this winter; he is practising law in E. St. Louis. Al. H. Overman recently visited us. He has left Root & Cady, and is now traveling for Hadley Bros. He represents business as lively. F. M. Earhart is cashier of the bank at Wyoming, Ill.

BOOK TABLE.

No notices are ever inserted in this department, for which a price is paid. The BOOK TABLE of the SCHOOLMASTER is entirely independent of outside influence. Books are discussed upon what appears to the reviewer to be their intrinsic merits. The primary object of our book notices is to give to our readers the benefit of the opinion of the SCHOOLMASTER. All books sent to us are thankfully accepted; we are desirous of receiving all new works. The reviews may not always be just, but they certainly will come from the pens of fair dealing and unprejudiced persons, and will be written only for the benefit of others, never for pecuniary reward.

Geometrical Analysis, or the construction and solution of various Geometrical Problems from Analysis, by Geometry, Algebra, and the Differential Calculus; also the Geometrical Construction of Algebraic Equations, and a Mode of Constructing Curves of the higher order by means of points. By BENJAMIN HALLOWELL, formerly proprietor of the Alexandria, Va., Boarding School. J. B. LIPPINCOTT & Co.

This work, "dedicated to Swarthmore College, including the youth of both sexes, its successive inmates, who are devoting themselves to the pursuit of a knowledge of the True, the Beautiful, and the Good in every department of Science and Nature," is interesting chiefly to favored teachers who are instructing advanced pupils in the higher departments of mathematics; as well, however, to students who have attained to a good degree of acquaintance with the principles of geometry, algebra, analytical geometry, and the calculus. The work does not claim to be elementary: yet the mode of analysis is so clear and suggestive that persons who have a fondness for investigating mathematical relations, will find themselves in most inspiring company when with our author. Most of the problems are analyzed by pure geometry, the student being expected to construct them with the scale and dividers. The author believes that the analytic or algebraic method of Descartes and Laplace, efficient as it is in the hands of a thorough mathematician, is not so well adapted as the geometric method to impart a knowledge of principles and inspire a taste for the science. Those who use this work will be compelled in selecting problems from it, to do so on the basis of their own judgment, as the author has intermingled the easy and the difficult, with little regard to the needs of the pupil.

The Forms of Water, by JOHN TYNDALL, Prof., etc D. APPLETON & Co., NEW YORK.

It seems from the announcement in this book, that the Appletons have entered into an arrangement with several publishing houses in Europe, and with very distinguished authors both in Europe and in America, for a series of books presenting science in a popular style, level to the comprehension of non-scientific readers. These books are to constitute "The Inter-National Scientific Series." Among the writers, are such names as Tyndall, Huxley, Spencer, Lockyer, Dana, Whitney, etc. The series cannot fail to be of great interest and value; and no teacher who means to "keep up with the times"

can well afford to be without these books, or, at least, some of them. This work of Prof. Tyndall's, the first of the series, is a beautiful volume of 192 pp., price \$1.50. The book is illustrated very finely, and contains a clear picture of the author; its whole appearance is very pleasing. We have read it, with very great interest and pleasure. It treats of the molecular structure and movements of water, of evaporation and condensation, of freezing and thawing, and very largely of the Swiss glaciers, and of icebergs. It is no mere bald statement of facts; but principles are clearly elucidated and applied; the experiments by which they are proved are described with the utmost simplicity and clearness. A very large part of the book is devoted to the glaciers; and we know of no other place where the learner can get so good an idea of their appearance, formation and movements. The author writes as though he were directing the studies of a bright boy of fourteen or sixteen; and his style leaves almost nothing to be desired in a scientific point of view. We must say, however, that we were not pleased to find him speaking of hot air as "rising, and cold air coming in to take its place." Hot air rises when it is *pushed up*, as anything else will. There is no intimation in the book that there is any Power back of the laws of nature, no leading "through Nature up to Nature's God." Some might urge this as a serious objection; but we do not conceive such recognition as *necessary* to a book on science. If the author had let the matter entirely alone, we would have said nothing about it; but we think he has alluded to it once or twice in a way that is very objectionable. On page 123, he alludes to Count Rumford, who speaks of the fact that water expands just before freezing as a "palpable proof of the wisdom of the Creator," in thus making water an exception to the general law that heat expands and cold contracts. He seems to blame Thompson for attributing this to an act of the Creator, and says that the whole of his "delight and enthusiasm in connection with this subject, and the whole of his ire against those who did not share his opinions, were founded upon an erroneous notion." It is true, the author then shows that water is not the only liquid that behaves thus, and he explains the probable philosophy of this strange movement; but we are unable to see that the matter is any the less wonderful, or any the less an exhibition of the Law-giver's wisdom and goodness in adapting means to ends, than it seemed to the mind of Thompson, who was both a scientific and a religious man. We think a man may be both; and, had we a boy of fourteen, we should prefer such a man for his instructor. The author's sneering allusion to the "beautiful myths and stories of the Bible," on page 152, is still less called for. Notwithstanding these blemishes, as we regard them, we heartily commend the book to all who are interested in a very important branch of Natural Philosophy; No person preparing to meet the demands of the new school law in Illinois should be without it.

Krusi's Drawing Books, Four numbers. D. APPLETON & CO., NEW YORK; P. B. Hulse, Agent, 607 Wabash Avenue, Chicago.

It is very clear that Drawing is speedily to take a higher and more prominent place among our school studies than ever before. These books are prepared by Prof. Herman Krusi, of the Oswego Normal School, who has already published an excellent text-book on Perspective. We think these books are among the best that we have ever seen for young learners. No. 1 begins with straight lines, combining them in a very simple, yet ingenious way, so as to give the outline of many familiar objects. No. 2 continues this work much farther. No. 3 introduces curved lines, and their simple combinations; while No. 4 takes the little pupil on to the outline representation of flowers, fruits, corals, shells and some of the simpler forms of animal life. We confess that we should like to see these little books in use in every common school in the country.

The Independent Child's Speller; by J. MADISON WATSON. A. S. BARNES & Co., New York and Chicago.

We welcome a speller that is not an old fashioned spelling-book. Mr. Watson has here given us something new. The book contains no words printed in Roman type. As we learn to spell, that we may know how to write, we have here the true method. Our prejudice against spelling books in school must give way before this new comer. Printed in script, the child learns to read and write at first, as he must ever after use what he learns. The philosophical arrangement of words according to the vowel sound

is an excellent feature. The form of the capitals would be better given, to our mind, if the simplest form possible had been used, rather than with flourishes. As the pupil gets his first idea of the script letter from these forms, and as he should be required to make each one himself, less difficulty would be, were each letter made with the fewest lines possible, and these lines of easy making. Few teachers can make a capital B, R or D, well, after the model in the book, much less can a child. This criticism does not in the least detract from the merits of the idea upon which the book is made, and which we are bound heartily to commend.

PERIODICALS.

The *University Reporter*, published at Iowa City, is the organ of the Iowa State University. It is a handsome paper of 32 pp., three columns to a page. It is so good a paper that it ought to be better, for we are sorry to observe in the copy before us, Vol. V, No. 2, many evidences that the proof-reading is of the most careless sort; while there are mistakes for which the proof-reader is not responsible. On p. 19, of this number, we read of the "altercations of hope and despair;" On p. 20, Ann Arbor, Mich., is put in the Mississippi Valley; on p. 26, we have the expression, "that many." On the same page, the table of graduates contains several mistakes in the addition of numbers.

We are indebted to the *College Courant*, as usual, for quite a number of notes and items; it is to us one of the most valuable of our exchanges. But, why does not the proof-reader of the *Courant* do his duty better? In noticing the burning of the Female College at Jacksonville, Ill., Pres. De Motte's name is rendered Demolter! There are numerous errors, however, in the same number, for which there is less excuse than for mistaking a distant proper name. The *Courant* is so good, that its publishers should compel the removal of this blemish.

The *Madisonensis* is one of the finest in its appearance of the college papers; it is edited with sense and spirit.

The *New York Nation* we read with more interest than any other weekly on our exchange list. Its presentation of news is excellent; its correspondence, interesting and instructive; its editorials, sharp, and sensible; and its reviews of books, careful and discriminating. In a literary point of view it is seldom open to criticism; but, we suggest that the following sentence, taken from the issue of November 28th, is better in its sense than in its structure:

"Woodhull & Claflin began by publishing a newspaper in which they did indeed promulgate doctrines which, as everybody should have seen, embodied a theory upon which, however it may be with saints and angels, ordinary men and women cannot act without unduly encouraging the brute-beast part of their natures, and which will be openly acted upon when society goes to pieces, and not before."

PUBLISHERS' DEPARTMENT.

Now is the time to send in your clubs for the *SCHOOLMASTER*. We have received a large number of clubs numbering from twenty to fifty, within the last six weeks. Our premiums are very liberal; if any teacher wants a watch or books, he can get them for a little outlay of labor in this direction. Remember that we send the *SCHOOLMASTER* free to any one who orders through us, four dollars' worth of ordinary school books at regular rates. We are compelled to apologize to some of our friends with regard to the November *SCHOOLMASTER*. The unexpected increase of subscribers exhausted the edition early in the month, hence we were unable to send that number to some who expected it.

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER,
Volume VI.

ILLINOIS SCHOOLMASTER.

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NUMBER 57.

SCRAPS FROM A TEACHER'S BRAIN.

The teacher finds himself constantly in contact with growing mind. We often talk about dwarfing the intellect by wrong processes in our educational work. The truth is, however, that the mind is not so often dwarfed, or even stunted, as it is rendered misshapen by our mismanagement. No mind was ever so dark, from either immaturity or lack of incentive exterior to itself, as not to have innate a tendency to assimilate to itself knowledge of some sort. It should be the office of the teacher to provide fit aliment for this natural *mind-hunger*; and to fit him for this work, it is imperatively necessary that his scholarship be both accurate and extensive. Let him place no bounds to his acquisitions in any and every branch of human knowledge, and let him at the same time by no means fail to be thorough, so far as possible, wherever he pursues his investigations. Let breadth and depth be his motto. If possible for the two ever to conflict, then let it be breadth *rather than* depth. Let him, if you please, be a superficial scholar in a certain sense, and at the same time, on the contrary, let him ride hobbies to his heart's content. Frequently those who have dived deepest into the ocean of truth, are the very ones who are flippantly spoken of as superficial scholars, surface men. It seems to be taken for granted that a general scholar is of necessity blamably superficial. It is, of course, actually impossible for any one in this period of the world's history, to acquire even all of science which has hitherto been classified

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as such, but it is as true as trite, that the arrow aimed at the noon-day sun will fly higher than one aimed at an object on its own level. If each one of us, as interested in educational or literary pursuits, had some special subject before his mind for constant thought and investigation, or, to speak it plainly, if each one of us had some hobby to ride, it may be conceived that even this might conduce to the desired result of an extensive as well as an accurate scholarship.

Mr. A. devotes a large portion of his time to original thought and investigation, with reference to the science of *Astronomy*.

Mr. B. applies himself mostly to *abstract mathematics*, and his friends perhaps think him nearly or quite a monomaniac on the subject.

Mr. C. devotes his spare time to the Genius of *Natural History*. Birds and insects occupy his leisure hours, and watching caterpillars has for him as many attractions as watching the stars has for his friend the astronomer.

Mr. D. belongs to a microscopical club, and dreams of Diatoms and Desmids, and loses himself in endeavoring to arrive at distinctive differences between animals and vegetables, which will stand the test of microscopic investigation.

Now, let these four men be brought constantly into one another's society. Perhaps Mr. A. has the floor. B. C. and D., although perhaps experts in their respective fields for special work, are all struck with something of a sense of inferiority, as the astronomer talks learnedly of parallaxes and eclipses, of constellations and comets, of Kepler's Laws and the Theory of Universal Gravitation. To be sure, Mr. B. pricks up his ears and nods assent and looks wise, when reminded of the use of trigonometrical formulæ in computing the distances among the heavenly bodies, while Mr. C. is much interested in the question of the habitability of the planets other than the earth, and Mr. D. is perhaps set to wondering whether the polariscope may not detect in the sunbeam the necessary chemicals for the electric formation of the acari, still by many believed to be at least the secondary origin of all animal life.

What is the result. When the listeners are again by themselves, down comes the dust-covered astronomy from the shelves. A reperusal kindles anew the flame which once burned, though feebly, on that altar. Investigation follows and much good is accomplished.

Similar good results follow from the labors of B. C. and D. While Mr. Entomologist is groping around for his algebra, or considering the propriety of investing in a 1-15 inch objective for his prospective microscope, Mr. Astronomer subscribes for the *American Naturalist*, makes an investment in gun and accoutrements, and with murder in his heart, for the purposes of science, plans an expedition to the nearest wood. Thus all become interested in some branch of science, previously, in many respects, a sealed book to them.

It seems to me that hobbies, ridden in this way, with a moderation which does not prevent one from turning aside to investigate truth of any description, are to be desired rather than deprecated.

Whatever work a teacher has to do, let him for the time being make that work a specialty. The success he may attain by well-directed, constant, patient effort in one direction, even temporarily, may inspire others to a special effort in the same direction, and thus by a mutual reflex action of mind on mind, among teachers frequently brought in contact, we "humble seekers after truth" may attain results hitherto unattained if not unattainable, in the matter of an accurate and expansive scholarship.

Again, inquisitive scholars sometimes propound most provokingly embarrassing questions. It is a teacher's misfortune to be obliged to say occasionally, "I don't know." But let not that answer ever be given TWICE to the same question, if the circle of human knowledge anywhere embraces a fit answer. Be only thankful for every suggestion from whatever source, which discloses a vulnerable point in your professional armor, and lose no time in having it properly attended to, for in this case at least, it is distressingly true, that *a hole lasts longer than a patch*.

This necessity for constant study is especially evident to those teachers, whose reflection convinces them of the existence of a constant and growing tendency on their part, to lower themselves to the standard of their pupils, instead of endeavoring, by all possible means, to elevate their standard towards the level they themselves occupy. I say *towards*, advisedly. It should not be *to*. For the teacher's ambition should still be onward *and* upward.

To attain this end, his work need by no means be confined to the routine of the school-room, even though the teacher may be preparing

for some special work there. It need not of necessity have always any direct reference to that work. The discipline which we so much need in sharpening the mental powers may many times be obtained more successfully, by a study of some branch of science a grade much higher than that in which recitations are about to occur.

And let not the instruction be unnecessarily minute. Let explanations be thorough, but not needlessly expanded or repeated. Mind is not rendered active by being kept in a half-interested listless state, while undergoing the torture of an almost endless repetition of some set method of analysis, be it grammatical, mathematical, or what you please. "Milk for Babes," we read, but if we continue to supply the minds of youth with *spoon-victuals*, may we not reasonably expect that they continue undeveloped? I fear we too often, and perhaps usually, underrate the capacity of the youthful mind. I do not believe in dunces. I never had one. If a scholar is unusually backward, a little investigation will always show that circumstances have prevented his being advanced to the point which we perhaps think he ought already to have attained. It is at least a debatable question, whether the differences in the natural talents of human beings are so great as they are usually supposed to be. Most, I think, will agree that original differences are usually slight, and that they are rendered more appreciable, if not primarily evident, by education and circumstances.

Geniuses are extremely rare. Scholars who are geniuses are rarer still. Scholarship is the reward of exertion. Industry is the touchstone by which we most truly judge of one's future success. In the matter of difference between Messrs. Grit and Talent, I should like to have the opportunity to charge the jury that the law and the evidence are both for the plaintiff, and that they must bring in their verdict accordingly.

To recur a moment. Why may not this idea of special work for a teacher be made useful in assigning the work in our large schools? Why should not an expert in any particular branch, be made use of to drill classes in that branch as a specialty, rather than otherwise? Is it not getting the best product of the teacher's brain for the benefit of the scholars if we not only permit, but compel each teacher to have, for his school work, some special branch of study? And yet it is to be hoped that this never will be done to the extent of shutting off the in-

dividual teacher from any other branch. Let him be so *versatile* in his inclinations as to expand over the widest possible area of human knowledge, and at the same time cultivate such a power of concentrativeness, with reference to the immediate matter under consideration, that nothing extraneous for a moment blunts the keenness of his discrimination.

And why should this thought be carried out in actual practice only in the highest grades of our school system? Is it not really of far more importance that the youngest of our scholars have the best means and appliances brought to bear for their benefit? If my boys have good teachers till they are ten or twelve years old, I shall be abundantly satisfied, for no after instruction, by the poorest hands, can entirely upturn the well-laid foundation of their education. But, if they have poor instruction till that time, the best teachers can never teach them to unlearn what has unfortunately been too deeply impressed upon their susceptible minds.

Again, are we not in danger of theorizing very extensively in our teaching, and reducing too little of our theory to practice? To give the why and the wherefore, was once as original a notion as the comparatively modern cry of object-teaching. Whys and wherefores have undoubtedly been given and required, and teaching by objects has undoubtedly been practiced, ever since Cain and Abel took their first instruction from the lips of good old Mother Eve. The trouble has been that teachers have exercised the memory both in themselves and in their scholars, until memory, and memory alone, has been cultivated, and that too frequently at the expense of the other intellectual faculties. A reform movement, looking to the more thorough training of the reasoning faculties, has, at different times in the world's educational history, been very properly inaugurated, of which the "why and the wherefore," and "teaching by objects," are but offshoots. But what has been the result? Has not education many times simply degenerated into the use of these special means, with too little reference to the ends to be attained by the means? In avoiding Scylla we have plunged into Charybdis. The consequence is, that the scholar is now but too frequently groping around in a cloud of uncertainty, from which his textbooks and his teachers fail, in many cases, to extricate him. He has ideas, perhaps, but they are vague, uncertain. Sharp, well-defined ideas, clear thoughts and clear modes of expression are not only un-

possessed, but apparently undesired. They seem to be at a wonderful discount. They ought to be at a premium.

Fifty years ago, and even less, to have ciphered through the Rule of Three, in Daboll or Adams or Pike, was almost a sure guaranty of commercial position. But how was the work thus far done? Do none of you recollect how, in prowling around the old garrets down in New England, you came across the ciphering books of your fathers or uncles, wherein were written out in full, solutions of all and singular the examples, omitting neither rule nor explanation? I would not be understood as advocating a return to that style in its *minutiae*, but it is certainly a serious question whether in our rage for whys and wherefores we have not thrown the practical almost entirely aside for the theoretical, and that very greatly to our disadvantage.

Less school instruction, and more individual investigation, would render scholars more self-reliant. Too much is done for them. The text-books are too ample, the teachers too communicative. Away from book and teacher, the scholar is at sea, with neither chart nor pilot. This might be remedied to some extent, if the pernicious doctrine of a series of text-books on every subject were more frequently opposed. One book, as a school text-book, on any one subject, thoroughly read and digested, makes a good foundation. If properly written, the ideas are definitely expressed, and the scholar, after having conquered it, knows exactly what he does not know of the subject. He then knows precisely what to investigate. His perceptions are quickened, his self-reliance improved. It was Confucius who said that "Knowledge consists in knowing what we know, and also in knowing what we do not know." "The knowledge of our ignorance, and the ability to make a sharp distinction between the known and the unknown, will save our scholars, as well as ourselves, from arriving at many false conclusions."

The plan of allowing the *practical* to resume its legitimate place in school by taking the place of the theoretical to some extent, will, perhaps, keep some teachers employed who now occasionally have the time hang heavy on their hands. Their own minds will be on the alert for new material, by means of which to test the accuracy and reliability of their scholars, and some of the listlessness and half-heartedness in the profession may disappear. No thoughts of improvement, socially, financially or otherwise, should be allowed to come between the teacher

and his work. If his soul is not in his business, he has mistaken his calling, and the sooner he leaves it, the better for all parties concerned. It is a great pity that so many of us, of both sexes, are disposed to regard our noble calling only as a means to an end. Such are constantly casting about them for opportunities of bettering their condition. They are discontented, absent-minded, and, as teachers, wonderfully unsuccessful. Such things are very unpleasant to professional teachers, but it is well perhaps that they be endured with equanimity, since we know that every profession has its quacks, and time, that purifies all things, will some day separate the *gold* from the *dross*.

Chicago, 1868.

O. S. WESTCOTT.

WHAT CAN BE DONE WITH SCIENCE IN PRIMARY SCHOOLS?

That something should be done with science in primary schools, the question itself presupposes. It is tacitly admitted in this country, and strongly urged in England, France and Germany, that upon science depends the salvation, or, to use a word that has meaning, the preservation, of the human race upon the earth. Arts and inventions become necessary to people living in communities too large to be supported by the area of the ground upon which they dwell, or by the flocks that could browse thereon.

By ingenious labor-saving machines, one man can create as much value as one hundred men could do by raising the crude products of the earth, or manipulating them with hands unaided by the appliances of cunning machinery. Over all improvements, science is the presiding goddess. And with the number of inhabitants on the earth, and the innumerable wants of modern society, the alternative offered the world is either to study or to starve. Study what? Certainly not the laws and fantasies of people long since wiped off the face of the earth; nor the immaterial differences of doctrinal questions; nor the geography and political economy of worlds of which we never did know and never can know anything; but the laws and principles of the palpable world around us—the world whose materials we must weave into clothing, and construct into places of shelter; whose storms we must provide against;

whose fields we must till ; whose bread we must eat, if we would live upon the earth.

With the first flint that was shaped into a spear-head ; with the first grain that was placed in the cherishing mould to increase and multiply ; with the first garment that was made of leaves, or of the skin of the more fortunate beast, whose clothing was ready-made ; with the first thatch that was placed above the hitherto unsheltered head, commenced the study of physical science and the practice of art among the children of men. And whatever mankind has been in the past ; whatever comfort and independence it has in the present ; and whatever glory it may expect to achieve in the future, was, is, or shall be, through the cultivation of the physical sciences. More : whatever depths of degradation the human race has sounded ; whatever beastly credulity it has been guilty of ; whatever mire of superstition it has wallowed in ; whatever fury of bigotry and bloody intolerance and fiery persecution it has practiced, has come from the neglect of the natural sciences or from the inferior position which they were obliged to occupy in the world's curriculum of study.

The science of one generation becomes the art of the next, and the trade and occupation of the next. A philosopher experiments with a little fire, water and metal ; his followers carry his ideas into the making of ingenious machines, which, in after years, give employment to thousands—which feed the hungry, clothe the naked, and shelter the shelterless—which perform all the temporal and many of the spiritual works of mercy. Should mankind do less ? Could angels do more ? By the insight we get into the tricks of Dame Nature, we are enabled to extort from her stock and store, sufficient of the world's goods to keep us through a rainy day ; by Science and her daughter Art, we are able to exercise a prudent foresight, and to lay up supplies, so that when a little less or a little more rain or drought occurs, whole nations need not perish. The only perdition the world need fear is ignorance—and, contrariwise, the world's temporal salvation depends upon scientific knowledge.

If such, then, be the importance of science, surely it is advisable to turn the attention of youth in that direction while its faculties are quick, its appreciation keen, and its impressions vivid. That children are capable of apprehending scientific truths, nobody will deny. In-

deed, Bulwer Lytton, in one of his most powerful novels, pictures a boy studying botany and natural philosophy of his own accord, till, his head beginning to grow too large for his body, it became necessary to send him to school to make him healthy and a dunce.

Were all teachers just what they should be, there would be little difficulty in answering the question, "What can be done with science in primary schools?" It would simply be to let the teacher ask and answer questions as the spirit moved him. Thoroughly informed in the facts of science, having a love for his subject, with facility of illustration, and the gift of simple and forcible expression, a teacher would have no need to ask, What shall be done with science in my school? But the truth is that our system is ahead of the ability of our teachers to carry it out—our spirit of improvement is willing, but much of the flesh, whose duty it is to execute the improvement, is very, very weak!

The systematic effort which we have been making of late, to introduce a little science into primary schools, by means of object lessons, or in an oral course, has been, on the whole, a lamentable failure. When the method was first instituted, the intention was to discuss mainly objects present to the eye, and the plan contained the kernel of a great deal of good; but, adopted generally, and ordained into a system, it has shared the fate of many other truths with organizations formed for their perpetuation and propagation—the spirit of oral instruction has been lost in the letter—it has degenerated into dry, jog-trot, mechanical formalism.

The difficulties are these:

1. Any science is too extensive to be presented fully to a class of primary children; so teachers have to find how their classes are to be examined, and shape their instruction accordingly. The result is that instruction in oral becomes stereotyped; and the moment it becomes a lesson, a task, that moment it ceases to be oral teaching in the original significance of the term. When children write their oral lessons, or when teachers write them before giving them, or when pupils learn oral by constant drill and repetition, it is folly to call the exercise an oral lesson.

2. Teachers going frequently over the same ground, lose interest

in the subjects, and especially so if they do not keep up a course of reading or observation in scientific pursuits.

3. The attempt to teach object lessons without the objects, or to give the results of experiments without the means of presenting the experiment, is the height of folly.

As remedies, I would suggest :

1. That the principal of a school examine the classes in every branch but oral ; that the teacher herself examine her class in oral in the presence of the principal. In this way, the teacher has more latitude in giving instruction, and, knowing what she has given, she knows what to call for.

2. That such subjects be chosen as can be vividly illustrated. That children see experiments rather than listen to descriptions of them. It may seem visionary to expect apparatus for philosophical experiments in primary schools ; but such consummation is not so distant to-day as high and normal schools were a few years ago.

3. That science primers, juvenile botanies, youth's astronomies, etc., be encouraged. Such works are a blessing to both children and parents. Though the calculations by which scientific men arrive at their grand conclusions may not be within the compass of the unlearned or child-mind, yet the conclusions and discoveries themselves are within the comprehension of all.

4. I would answer all questions of children truthfully, giving exact answers to questions within the range of my knowledge, and avowing ignorance when unable to give correct replies. When less than five, I remember asking where God was before He made the heavens and the earth. I was told that He was in the well of divinity. With this I rested content. It was many years before the well of divinity dried up in my mind. I hope I shall be forgiven, but I have read some theological works since, without getting any more light than when my youthful thirst for knowledge was quenched in the well of divinity. A better answer to my question would be that my informant did not know. I would answer, I repeat, all questions in physical and mental and moral science to the extent of my own knowledge, and no further. If a child asks you about the next world, you can tell him all you know, without fearing that the quantity of information you impart will either injure his health or retard his growth.

I have heard a mother explain to a five-year-old child, the process of digestion, in a way that he evidently understood. But what a folly it would have been to have some physiologist proceed to give that child a technical examination upon the digestive organs! The general truths, the sum total of science, of all sciences, can be brought to the comprehension of all, however complex the separate items may be in themselves. Early recollections make me favor primary works on science. I may have received more information, but certainly not any more pleasure from any other book than from the little treatise on astronomy at the back part of Mitchell's Primary Geography, as it used to be. The appearance of the rings of Saturn to the inhabitants of that planet interested me particularly. Swedenborg, I find, differs in his idea of the aforesaid appearance. At present we are waiting for more light on that subject.

By all means, let us have science in primary schools. Let the little ones know the number of elements, the number of planets, their order from the sun—as well what we know of them *for sure* as what is mere guess-work. Let them know the general classification of animals, and, above all, let them study little books of botany which will be to them a revelation of the vegetable kingdom. Correct pictures may answer instead of the objects themselves; but at all times let us bear in mind that we are teaching primary children, not college students. What is water made of? Two gases—oxygen and hydrogen. What is oxygen made of? Nothing but oxygen, as far as we have yet learned. So air is oxygen and nitrogen, mixed together as you may have seen sand and saw-dust—not married, as oxygen and hydrogen are to form a compound, different from either, which we call water. We can impart a great amount of correct scientific information if we give ourselves the habit of using correct, yet simple, language.

Without the proper text-books, without a full corps of properly qualified teachers, without apparatus for experiments, it is hardly fair to ask, What can be done with science in primary schools? But if anybody should ask me what, under more favorable circumstances, could be done with science in primary schools, I should reply by saying, "Sir, what can not be done with science in primary schools?"

I think, too, that at present, we want information more than method. A paragraph on the beaver, for instance, mastered by the

teacher, and made by mental digestion a part of her intelligence, is better than a thousand skeleton recitations. It takes much more time to learn the routine of another's methods than to master the amount of knowledge which the recitation is to call forth. We can use only our knowledge; our own methods are easier, because more natural to us. We must be ourselves or nobody. So I would finally answer the poser of the executive committee, What can be done with science in the primary school? by saying, Cram your primary teachers full of scientific knowledge!

J. MAHONY.

DIRECTIONS FOR MAKING AND PACKING SPECIMENS OF NATURAL HISTORY. I.

It is designed to give, in a series of articles, some hints for the guidance of the young naturalist, in collecting, preserving and shipping specimens in Natural History. The first paper will treat of birds and their nests and eggs; the second of mammals, fishes and reptiles; and the third of mollusks, and of geological, mineralogical and miscellaneous specimens. Instructions for collecting plants are to be found in most of the botanies in common use; and the student desiring to form an entomological cabinet, is referred to the paper by Mr. O. S. Westcott, in the *SCHOOLMASTER* for September, 1872.

1.—BIRDS.

The instruments and materials needed for collecting, are a gun and ammunition, a trout basket, or some similar receptacle for carrying specimens, some sheets of stiff paper, some calcined gypsum and some cotton. It is well to be provided with several sizes of shot, from dust shot or No. 12, for humming birds, to No. 5, for geese and other large birds. The basket may be suspended by a strap over the shoulder, so as to rest on the hip. In the absence of gypsum, powdered chalk, air-slacked lime or ashes may be used.

For preparing specimens, the collector should have a scalpel or sharp knife, a pair of spring forceps, a pair of long forceps, two pairs of scissors (one with sharp points and one thick and strong), some needles and thread, a note-book, a pocket-rule, some arsenic, and a stout fishhook and line with the barb of the hook broken off.

Birds should be shot with light charges, and may be quickly suffocated, when the shot is not immediately fatal, by pressure with the thumb and

fingers upon opposite sides of the body beneath the wings. The shot-holes, mouth and nostril's, should be immediately plugged with cotton, and the bird placed head first in a paper cone, the base of which should then be folded over without breaking the tail feathers. The specimens should not be allowed to shake about in the basket or to press heavily upon each other. If the feathers are stained with blood, this should be scraped off with a knife or the finger-nail, or they should be sprinkled with a little powdered gypsum and lightly rubbed with the fingers until clean. If the blood has dried, the specimen may be cleaned, at any time, with a stiff brush, assisted by scraping with the nail; or, if very bloody, it must be sponged with lukewarm water, sprinkled with plaster, and *immediately* brushed with a soft brush, until quite dry.

The measurements required are the "length of the bird," "the stretch of the wing," and the lengths of the wing, tail and tarsus. The first of these is the length from the end of the bill to the end of the tail, with the neck extended but not stretched; the second is the distance from tip to tip, with the wings stretched to their full extent. These two measurements may be easily taken by laying the specimen with its back upon the rule. The length of the wing is measured from the outermost joint to the ends of the largest quills. These measurements should all be recorded, and each memorandum marked with a number which should also be placed upon a label and attached to the corresponding specimen.

In skinning the bird, first put fresh cotton in the mouth and nostrils, and then cut barely through the skin from the lower end of the breast-bone to the vent, and loosen the skin carefully on each side of the abdomen, exposing the thigh and knee. Then take the leg in one hand, push the knee up on the abdomen, and free the skin around it until you can press the knife beneath the leg, and separate the knee-joint and the muscles about it. Then pull the leg out of the skin as far as the scaly part or tarsus, cut the tendons here, and remove the muscles from the bone. Put a little cotton or plaster on the flesh, to prevent adhesion. Loosen the skin about the base of the tail, and cut through the backbone at the last joint, taking care not to cut off the ends of the quills or to cut through the skin of the back. The body should now be suspended, head downward, by the hook and line, and the skin drawn down until the wings are reached, when the bones and muscles of the wings should be separated from the body, either by the shoulder-joint or the middle of the first bone. Continue to reverse the skin until the neck and head are exposed, tearing the skin of the ear from its attachment with the nails, and cutting through the nictating membrane of the eye close to the lid. When

the skull is bared well down to the base of the bill, thrust the point of the knife between the eye-ball and its socket, and remove the eye without breaking it, cut off the neck, together with a part of the back of the skull, scoop out the brains and clear the skull of flesh. Pull the wings out of their skin until the second bone appears, the one to which the secondaries are attached, and separate these by pressing downwards forcibly with the thumb nail. Cut away the muscles and tendons from this bone, and divide the joint between it and the first bone or the humerus, removing the latter entirely. Now free the skin carefully from fat and muscle, and apply arsenic plentifully, both to it and the bones, especially to the skull within and without. Great care should be taken throughout not to stretch the skin.

When the head is so large that the skin of the neck cannot be drawn over it, as in the woodpeckers, ducks, cranes, &c., pull the neck through as far as possible and cut it off. Then make a short incision, (upon the back of the head for woodpeckers, under it for large birds,) draw the head through this, and afterwards sew the slit up neatly.

To prepare the specimen for shipment, connect the ends of the wing bones by a string tied so that the wings shall be the same distance apart as in life, wrap the leg bones with cotton, and turn the skin right side out. Then open the mouth, and stuff the upper part of the throat and the orbits, to their proper size with cotton, push a roll of cotton or tow with the long forceps well up into the neck, so that the latter shall be of the same size as in the living bird, fill out the body with a wad of cotton to a little less than life size, close the incision by a few stitches, tie the legs and the mandibles together, arrange the plumage, and leave the skin until quite dry. Attach a label to each specimen, giving the time and place of killing and the measurements noted, and pack in boxes, filling all vacant spaces with cotton, tow, or soft paper.

2—BIRD'S NESTS AND EGGS.

The nests and eggs of birds are of little value as specimens, unless the species is known to which they belong; and therefore, as a general rule, a nest should not be disturbed until the birds have been clearly identified. If there is any doubt whatever, the best plan is to shoot one of the parents and preserve the skin.

The eggs should be covered or wrapped with cotton before the nest is removed. The only preparation needed is to empty the contents. To do this, prick through the shell, with a sharp needle, two small holes, one a little larger than the other, at opposite ends or sides of the eggs; and, applying

The mouth to the smaller of these, blow the contents out at the other. If the egg contains an embryo, a larger hole must be made by pricking out a circular piece of the shell, through which the chick may be removed with forceps or a slender hook. The egg should then be rinsed, dried, and numbered with ink upon the shell, the same number being attached to the corresponding nest and bird, if these have been preserved. The name of the species, date, locality, etc., should always be noted, and the memorandum marked with the number of the specimen.

For shipping, the eggs should each be lightly wrapped in cotton and packed between layers of the same material in boxes of wood or stiff pasteboard. Loosely built nests will often have to be held together by strings; or they may be put separately in paper boxes of the proper size.

S. A. FORBES.

SHOULD AN EFFICIENT COUNTY SUPERINTENDENCY BE MAINTAINED IN EVERY COUNTY IN ILLINOIS?

The following resolutions were passed by the Illinois Teachers' Association at Springfield, December 27, 1872:

* *Resolved*, That a committee of three members be appointed to prepare and present to our next General Assembly, reasons, based on facts, statistics and experience, why a qualified and efficient County Superintendency should be maintained in every county in the State.

Resolved, That the County Superintendents should be required to hold State certificates, to be granted after proof of good moral character and competency to teach all the branches required by law to be taught in the public schools."

The undersigned having been assigned the duty embraced in the first resolution, would respectfully ask your attention to a brief statement of some of the "facts, statistics and experience," which seem to them to favor an efficient superintendency.

The education of the children of the State is of vital importance.

Its influence is interwoven with the entire fabric of society.

Inducing intelligence, industry, temperance and honesty, it is the motor and directing power of all industries, trades and professions.

It is the cheapest and most effectual of all agencies to secure good government.

The school system of Illinois is already a power. It acts directly upon 900,000 children. School influences reach 500,000 homes.

Every man enjoying the privileges of the State owes more to the direct

* The committee consists of Hon. Willard Woodard, Chicago; James H. Blodgett, Rockford, and E. A. Gastman, Decatur.

and indirect influences of the public schools than to all other means for the improvement of man combined.

And yet its power can be greatly increased without a large outlay of money.

As a question of finance, it stands second to no question of the Commonwealth.

Whether this use of our resources shall be an investment or a burden, depends greatly upon the management of our schools.

Every dollar should be spent with a view to secure the best possible results.

We have no money to waste upon incompetent teachers or school officers.

Our total expenditure in 1872 was \$8,907,036.27.

We had about \$18,000,000 of school property.

The salaries of teachers cost \$4,339,256.31. We had in operation 11,396 schools.

Pupils spent in the public schools of the State, 49,842,481 days during the year 1872.

This is equal to 136,554 years of life-time. It is at a period, too, when direction is given to the entire life of our citizens.

Add to our annual expense, \$8,907,036.27, the value of pupils' time at 10 cents per day, \$4,984,248.10, and we have \$13,891,284.37.

Estimate this time at 25 cents per day, and it gives us an expenditure of \$21,817,656.52.

Is not this a vast financial interest?

Does it not call for an examination into every part of our system?

What would an individual or a corporation do, if assigned the management of such great interests?

Would there not be a recognition of the fact that success requires intelligence, industry and energy?

If a corporation had 11,396 workshops, would not every one be looked after by a man who understood the business?

What would be true of workshops ought to be true of schools.

Community has a great interest in the work turned out by the 20,000 teachers paid by the State.

The highest good of the child requires that every step in his progress should be guided by the most skillful workman.

We know that there is a great difference in teachers.

Experience has proved that by a proper supervision the standard for teachers can be raised.

The best as well as the poorest can be made better.

If the efficiency of our schools could be doubled it would be equivalent to adding \$8,907,036.27 to our revenue, or 136,554 years of school-life to

our children. It is the opinion of those best informed that this can be done. It is within the experience of all that some teachers accomplish twice as much as others.

The most foolish investment any community can make is to put its money into a poor school. It is a waste of money; it is a waste of life.

The County Superintendency was established to guard and protect these school interests.

Schools have made progress in proportion to the intelligence and earnestness of supervision. Is not this the experience of every man who has given the subject attention?

The duties assigned this officer by our Legislature will be found in section 20 of our school law:

"It shall be the duty of the County Superintendent, if so directed by the county board, to visit, at least once in each year, every school in his county, and to note the methods of instruction, the branches taught, the text-books used, and the discipline, government, and general condition of the schools.

"He shall give such directions in the science and methods of teaching as he may deem expedient and necessary; and shall be the official adviser and constant assistant of the school officers of the county, and shall faithfully carry out the advice and instruction of the State Superintendent. He shall encourage the formation and assist in the management of county teachers' institutes, and labor in every practicable way to elevate the standard of teaching and improve the condition of the common schools of his county.

"In all controversies arising under the school law, the opinion and advice of the County Superintendent shall first be sought, whence appeal may be taken to the State Superintendent upon a written statement of facts certified by the County Superintendent.

Again, in section 50:

"It shall be the duty of the County Superintendent to grant certificates," &c.

Let us note these requirements:

1. He is to visit, at least *once a year*, every school in his county. (That is certainly not an unreasonable provision.)

2. He must note methods of instruction. (He should understand methods.)

3. Attention must be given to branches taught, text books used, (it would be well, then, for him to know what is in text-books) discipline and general condition of schools.

4. Directions must be given in the science and methods of teaching. (He cannot give directions unless he understands the science.)

5. He is to be an official adviser and constant assistant (he must know what he advises, for the stream will not rise higher than the fountain) of teachers and school officers.

6. He must carry out the instructions and advice of the State Superintendent. (This should be wisely done.)

7. He must take the lead in teachers' institutes. (We do not want a blind leader.)

8. He must labor in every practicable way to improve the schools. (He wants to know what is practicable.)

9. Assistance must be given in settling all school controversies. (He must be a prudent man, and one whose judgment will be respected.)

10. Teachers must be examined. (The examiner should know as much as the examined ought to know.)

We call especial attention to the fact that all of these duties require intelligence, labor and time.

Can we dispense with a full and proper discharge of any one of them?

The superintendent of a workshop ought to visit his workmen once a year.

Can this officer "note methods of instruction and be a constant adviser" even by a visit "once a year?"

How will these duties be discharged if the county board refuse to pay for any visits?

We believe that the officer should be paid for all of his time, and then be held to a strict responsibility under the law.

There is work enough to do for one active educator in every county.

We would call attention to the following list of the number of schools in each county. As this list is read over, we want to have the reader bear in mind that each and every duty required to be done by the Superintendent applies to each and every school of the county. In every instance please multiply the number of duties by the number of schools.

We give also, in the same connection, the salaries of some of the county officers, to which we shall have occasion to refer. These figures were given to us by persons residing in the counties, and we presume them to be in the main correct.

Now if the work is worth doing, it is worth doing well.

The party assuming the responsibility should know best how much time ought to be expended.

As a rule, most progress has been made where this officer has spent most time in visits.

If we are to fight a battle, we want our general to have his headquarters in the field.

How can he labor in every practicable way to "elevate the standard of teaching," when he is denied the only practicable way of *knowing* what is being done in the school-room.

Annually, in every county, there are several young persons who commence their first school.

They need watching, assistance, encouragement and kindly advice.

The school-room is the only place to do this work.

Failures of young teachers do not often occur from lack of effort.

They result from misspent strength.

Here and now the service of the Superintendent is needed—not a visit “once a year,” but daily, if need be, until the teacher succeeds or is discharged.

It would be a “stitch in time.”

Please examine our list, and see if there is any need of placing the power of limitation in the county board. Does it need any argument to prove that an efficient Superintendent could be profitably employed?

Alexander is the smallest county, having but 23 schools.

Visits could not be made in this county oftener than once a month.

We mean a visit long enough and for the purpose of doing the school good. Visits by a practical and capable man would be to attend to the work of the school-room.

In the largest counties there is far more work than one man can do.

Every day of a school of sixty pupils is an investment in time and money of at least forty dollars.

A teacher who can, by superior methods and personal magnetism, accomplish twice the average work, increases the investment one hundred per cent. He does what is of far greater importance. He forms habits of thought and action which control and strengthen the life of the pupils. Our schools are most valuable for that for which they lay a foundation. What is true of the teacher is true of the Superintendent. Here let us remark that we never reduce the salary of a good teacher because there are some poor ones. Our great advance must be in the direction of furnishing teaching power. Progress must come by the work in the class-room.

The County Superintendent is an efficient agent in this work. His knowledge and devotion should permeate the whole system.

But we may be met with the statement that such an officer is too expensive.

In 1870 this officer cost the State \$97,909.85, being an average of \$956.90 for each man. Let us apply this salary to Alexander county.

The number of pupils attending school was 1,690.

The cost would be 57 cents to each pupil.

Any man who could not render an equivalent for that amount should not be elected.

On one side it is 57 cents a year, and system and efficiency; on the other it is disorder and a careless, heedless expenditure.

We must have system. There must be some personal responsibility for carrying it out.

The annual investment for each pupil is about equal to the price of four cigars. This was under the old law, which gave five dollars per day, and left the Superintendent to visit as much as he thought best.

Taking the entire amount of salaries in 1870 and the number of pupils, we shall find the average to be less than 15 cents per pupil.

But it will be seen by examining our list, that our other county officers average more than \$959.90 each. We presume that the average pay of county judge, sheriff, county clerk, and clerk of circuit court, is at least \$1,800.

We assume that our educational interests are at least as important as any other. They ought to be no less valuable than mere clerical duties.

We want as much natural ability, culture, business talent and energy in this office as in any other department.

If not, why not?

Why should a county judge, sheriff, county clerk, or a clerk of the circuit court, receive a larger salary than a School Superintendent? Are the former usually more competent men? Do they supervise the expenditure of a larger amount of money? Do they have a greater influence in forming the public character? Do they devote more time to preparation for their work? Does a proper discharge of their duties add more to the public weal?

We think not. If county superintendents do not possess as much talent as county clerks, we suggest that it would be economy for these officers to change places and let the pay go with the best officers.

We want competency. We want the best educational man in the county, because he is the highest school officer.

A faithful discharge of the duty of examining teachers is of great value. It is a constant pressure for a higher standard. Who does not favor the pressure? How much better it is for teachers themselves!

The election of a Superintendent who is really in earnest, is a notice to leave, served by the people on every incompetent teacher.

Poor teachers scent a weak examining officer afar off, and flock to devour the people's substance, without rendering an equivalent.

When we appropriate our money, why not see that it is properly expended?

But can we get good men to fill these positions?

Create a demand, and see.

First, let there be a proper appreciation of the relation of this office to

our school system. Its requirements and responsibilities should be discussed. Let a reasonable salary be provided to induce our best men to seek the position.

The election for the next four years takes place this year. We have some good men now. We shall have many more if the office is held in proper estimation by our people.

The County Superintendent should be required to hold a State certificate. Why not? Do we not want the best man? Has the community any interest in electing a man who does not know how to teach the branches taught in the schools? Is it too much to ask a candidate to show his credentials! Who is willing to be injured by the incompetent? Let them pursue business more congenial to their tastes. It is sometimes said that this would abridge the rights of the voters. We think it would not as much as the party caucus. But the people do not want to vote for an unfit man. This objection will come mainly from the lame, halt and blind candidates. But the people will not weep. This requirement would do much to raise the standard and drive off those candidates who were not willing to make the effort to prove their competency.

The declaration by legislative authority that the candidate must possess qualifications would call the attention of the people to the demands of the office.

The higher the standard, the more honorable the position and the better the pay.

In making a selection, we have a half dozen candidates on one side, and on the other, every child in the county with a right to the best education that can be afforded.

If personal kindness is to influence, let it be in behalf of the children.

Few men get appointments as superintendents and engineers on railroads because they are good republicans or democrats, or because they have been unsuccessful in other professions or business.

Railroad and bank directors, and successful men, do not make large investments in sympathies for incompetents. The same rule should be applied to teachers and school officers.

The law now allows \$4 per day for visits. This includes the expense of travel. The salaries amounted to only \$959 when the pay was \$5 per day. This is several hundred dollars less than other county officers who have less expense, no better qualifications, and who perform no more work than the interests of our schools demand.

We suggest that the pay be sufficient to obtain the best teacher in the

county. This will average, with expenses for travel, five hundred dollars more than Superintendents received under the old law, and seven hundred dollars more than will be received under the present law. A successful teacher cannot afford to take the office of County Superintendent. He can do better in the school-room. And yet he is the man that we want. The office should be put on a level with others in the county.

Our people would not object if it systemized and energized the schools. A position requiring good natural and literary qualifications, fine business habits, skill, tact, devotion and enthusiasm, is not easily filled. Men possessing these qualifications are always wanted in business. Capital can give constant employment and full pay. Why should not public business be managed so as to secure first-class talent?

We submit that the law should be changed and the pay increased, so that at the next election we may secure competent men.

We also ask that a law be passed embracing the idea that the County Superintendent be required to obtain a certificate of competency to teach that which he is to supervise. We believe that the next four years would fully justify the wisdom of such a course.

An act which would fill the office in every county with the ablest educator in it, and require all his time and effort, would be equal to adding 10 per cent. to the annual appropriation. It is safe to say that more than 10 per cent. of the public money will be wasted by the incompetency which is sure to come under the provisions of law giving to county boards the power of limiting the service and paying but \$4 per day. We ask for competency, because incompetency has brought the office into disrepute in many places: it is almost the only ground of opposition, and the principal reason why the pay was reduced by the last Legislature.

We will not here discuss, but submit, the question, whether the Legislature, under the constitution, should not fix the pay. If it should, can it delegate the power to the county board? Is not limiting the service by the county board substantially fixing the pay?

The more thoroughly this subject is examined, the more fully will it appear that it is economy to have efficiency, and to pay for it. Every agency calculated to improve society by guarding the sources of power, demands our best thoughts and most earnest efforts.

Let it be remembered that *now* is the important time to discuss this question. The work of this winter at Springfield must settle the matter for the ensuing four years. Let us canvass the subject earnestly, and either make the office of county superintendent an efficient one; else abolish it.—ED.

EDITORS' DEPARTMENT.

The publishers of the CHICAGO SCHOOLMASTER have bought of N. C. Nason, publisher, the "ILLINOIS TEACHER"; and the present number of the ILLINOIS SCHOOLMASTER is a consolidated journal, the successor of both those mentioned above. The present proprietors have also made such arrangements with Mr. E. W. Coy, as will still retain his eminent services on the present magazine. Our movement, therefore, is a real joining of forces which, though never hostile to each other, may, we think, be more effectively united. Six pages additional will be given to reading matter, making thirty-six pages in the present magazine. We propose to devote these additional pages mostly to Illinois affairs, so as to make our journal what the *Teacher* has been,—truly a state journal; while the readers of the *Schoolmaster* who live outside of Illinois shall have no occasion to complain that the range of our articles is restricted or rendered merely local. The cost of our periodical will be greater than the previous price of the *Schoolmaster*, but still as low as that of any magazine of its class in the country. Now we ask from the teachers of Illinois a united and increased support; let us all "pull together". Write for our paper!—Especially to the old correspondents of the *Teacher* do we make this appeal; send us items of news from your respective counties and towns; take pains to call the attention of teachers to the SCHOOLMASTER; get up clubs, and thus help us and help yourselves. We want to unite all the educational forces from Dunleith to Cairo, and from the Wabash to the Mississippi. Our honored State Superintendent, as will be seen by his card, will make our pages the medium of his communications to teachers and school officers; his decisions have the force of law unless they are overruled. Give us your hand then, one and all; we promise that, if *one-fifth* of the teachers in Illinois will give us their names and subscriptions, we will give them the best *School Journal* in the country.

Mr. N. C. NASON, of Peoria, for eighteen years publisher of the *Illinois Teacher*, promises us a sketch of the history of that old favorite of Illinois pedagogues, for our next number. He can tell that history, if any man can.

The Committees on Education in the House and Senate of the Illinois legislature, have been appointed. With these committees rests to a great extent, the fate of amendments, if any are made, to the school-law. That some changes are important every well-informed man on the subject believes, but that every member of either house is competent to frame amendments is hardly to be expected. Already, members, earnest, it is to be supposed, for the success of our school system, are rushing resolutions and bills before the assembly that are being referred to the proper committee and will burden them with unfruitful labor.

Some of these are foolish enough, and probably take rise in the brain of some Hon. who has discovered a wrong in his home district, and seeks to

right it by general legislation; others are evidently called for, while a third class are such as need and ought to receive investigation.

First and most of all that needs attention is that part of the law which relates to the county supervision of schools. The present law does not abolish that office, but it does worse; it so restricts the remuneration that no competent man can afford to occupy the position. Better wipe it off the book, than permit it to remain as it is, for our school system will surely fall into unsafe hands.

The evident cause of opposition to county superintendency is the inefficiency of the work in many counties,—the poor material that has filled the office. But this subject, we hope, will have a careful investigation before the committees.

It has occupied much of the attention and time of every convention of superintendents and teachers during the past year. Many facts have been gathered. Let every man consider it his duty to assist our legislators to a full comprehension of the subject. This once done the law will be made right. Unfortunate legislation in Illinois on schools is not so much the result of opposition, as of want of familiarity with the details of the school system.

We earnestly ask for the retention of the office of county superintendent with a *fixed salary, and qualifications such as shall enable only competent men to occupy the position.*

The appointment of Hon. H. M. Snow as chairman of the Committee on Education in the House is a most excellent selection. Mr. Snow has been in harness; he knows full well about schools, school management and school systems. Foolish schemes for the improvement of the school-law will have little prospect of success in his committee, while all desirable amendments will get careful consideration.

It is a good omen for the success of free schools that prominent school-masters of a few years ago, should be at the head of the most important committees.

Equal cause for congratulation is the appointment of Hon. Elmer Baldwin to the head of the Senate committee. There are yet left, in these days of *Credit Mobilier*, a few names in public life, untarnished by the shadow of any impurity or corruption. Ever one of the most popular and reliable men in his own county, La Salle; much in public office, yet never seeking it; unprejudiced, candid, of large experience and excellent judgment, we may be sure that resolutions, that are referred to the Senate committee, will lose nothing of good by passing under Mr. Baldwin's inspection.

On Tuesday, Jan. 7th, a most terrible storm visited northern Iowa and Minnesota, causing, we think, more destruction to human life than any other of the kind in our remembrance. The day had been very warm; but about 3 o'clock P. M., the wind shifted to the north; and it is said that in twenty minutes the degree of cold and the fury of the storm were terrible; the storm continued blowing heaps of snow until Friday. The exact number of

lives lost is not yet known; but, judging from present reports, it must exceed one hundred. The warmth of the morning had tempted many of the farmers to visit the villages, sometimes accompanied by their families. The disaster seems to have been the most terrible in the valley of the Minnesota river; seventeen coffins for the victims were taken out of New Ulm in one day. Children going home from school, in several instances, perished. One wise teacher, Hugh Jones of Judson, Blue Earth county, kept his pupils at the school house forty-eight hours; himself, at great risk, bringing them food and bed-clothing from a neighbors. His good sense and courage doubtless saved many lives.

Local institutes and township teachers' meetings are now-a-days of frequent occurrence: time was, when the teachers of a county were together but once or twice a year, and then, at the county institute. Peoria, La Salle and Marshall counties, are moving vigorously in this direction. Every Saturday the teachers and school officers of one or more townships meet in a convenient schoolhouse and canvass the work. Six or eight in attendance is sufficient for profitable work, but it is found that the attendance is from fifty to a hundred. Parents and friends who live in the neighborhood come in, and the free-school work is put before them. The editors of the *Schoolmaster* will gladly meet such clubs or institutes on Saturdays, when within reach of Normal by railroad.

OBITUARY.—Upon the appearance of *The Chicago Teacher*, "The Illinois Teacher" died a natural and proper death, and was buried in the graveyard of the ILLINOIS SCHOOLMASTER.—*Chicago Teacher*.

Is our contemporary so *young* that he does not know the difference between a wedding and a funeral?

A CARD.

STATE OF ILLINOIS,
DEPARTMENT OF PUBLIC INSTRUCTION,
SPRINGFIELD, ILL., Jan. 30, 1873. }

The *Illinois Teacher* has been the channel through which this department has communicated with teachers and school officers, from the origin of our free school system until the present time; the first State Superintendent, Hon. N. W. Edwards, having officially designated it as such.

Understanding that said journal has been merged in the *Chicago Schoolmaster*, this is to give notice, to whom it may concern, that the new magazine, THE ILLINOIS SCHOOLMASTER, will continue to be recognized as the educational organ of this department, the new managers having kindly tendered the use of its pages for that purpose.

NEWTON BATEMAN,
Sup't Pub. Inst'n.

P. H. Owen, of La Claire, Iowa, reminds us that no solution of the algebraic problem in the March SCHOOLMASTER for 1872, was ever given. As

the problem was in the previous volume, we repeat it, and give an abbreviated form of the solution he offers; the method is by indeterminate analysis.

If a man buys cows at 11 dollars a piece, sheep at 3 dollars, and geese at $\frac{1}{4}$ of a dollar, how many of each can he buy that he may get 100 animals for 100 dollars? Let x , y and z represent the number of cows, sheep and geese, respectively; then (a) $x+y+z=100$, and (b) $11x+3y+(z\div 3)=100$, multiplying (b) by 3, and subtracting (a) from the product, we have $32x+8y=200$. Dividing through by 8, and finding the value of x , we have (c) $x=(25-y)\div 4$. As the value of x must be a whole number, we give to y in (c) all possible values to allow such a result; these values are 1, 5, 9, 13, 17 and 21, respectively. No others are possible; and from these, the values of x and z may be readily found. Hence, the problem admits of six correct answers, and no more, as our correspondent clearly shows.

Friends, if you have an interest in this work, send us more problems.

The article in the January SCHOOLMASTER, on *The Province of the Free School*, by J. L. Pickard, should have been credited to the *Chicago Report* for 1872.

EDUCATIONAL INTELLIGENCE.

CHICAGO.—The schools opened on Monday, Jan. 6, with the usual reinforcements of new scholars and very little in the way of increased accommodations. A few of the large halls were divided during vacation, thus giving seating-room to 50 or 60 additional scholars in each school where such division took place. The plan pursued to admit as many applicants as possible, is to form double divisions of 100 to 120 pupils, one portion of them attending in the forenoon and the other in the afternoon. There are as many as 8 such divisions in some schools. This would be well if there were relays of teachers to meet the attack of each corps as it arrives. When the Kirk-Sessions held sway in Scotland, a worship was not worth a great deal unless it lasted twelve hours. The people could stand it, but the preachers couldn't. The difficulty was met by having fresh speakers ready to step into the pulpit as soon as one gave out. Then success in preaching depended entirely upon mind and bottom, as they say of steeple-chasers. One preacher was very tireless, but he was accused of being a watery old fellow, for "he spat and sweat" like mischief.

With the increase of children and the non-increase of school-houses, we shall have to make some such arrangement in Chicago. We shall probably have to keep open six-hours a day, dividing the time into four "watches" of four hours each, and having 4 sets of hands to take hold as the several "bells" are struck.

The demoralizing effect of holiday time was visible in the conduct of pupils at the opening of the schools; but the urbanity of the teachers was greater than ever. They

REPORT OF ATTENDANCE FOR DECEMBER, 1872.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
St. Louis.....	26,647	50	22,235	20,660	93	6,159	.....	W. T. Harris.
Chicago, Ill.....	31,140	18	28,961	27,408	94-6	10,189	.....	J. L. Pickard.
Cincinnati, O.....	24,217	25	21,421	20,490	95-6	7,363	.....	John Hancock.
Evansville, Ind.....	4,048	18	3,282	2,862	83-8	1,397	297	Alex. M. Gow.
Dubuque, Iowa.....	2,743	15	2,643	2,383	90	.....	.....	Thos. Hardie, Secy.
Springfield, Ill.....	2,316	.....	2,031	1,957	96-3	363	.....	Jas. C. Bennett.
Terre Haute, Ind.....	2,456	20	2,342	2,173	93	1,220	683	Wm. H. Wiley.
Freeport, Ill.....	1,401	18	1,190	1,123	94-4	486	.....	Chas C. Snyder.
West and South } Rockford, Ill., }	1,087	18	1,008	942	93	249	384	{ J. H. Blodgett. O. F. Barbour.
Danville, Ill.....	1,021	15	893	874	89-9	300	325	J. G. Shedd.
Alton, Ill.....	969	18	812	790	97	267	257	E. A. Haight.
Ottumwa, Iowa.....	727	10	626	604	96-5	169	285	L. M. Hastings.
Marsnalltown, Iowa....	610	15	679-3	555	95-9	65	380	Chas. Robinson.
East Denver, Colorado.	580	18	507	445	88	823	101	F. C. Garbutt.
Cedar Falls, Iowa.....	563	19	552	563	91	711	131	J. K. Sweeney.
Macomb, Ill.....	663	19	617	593	96-2	142	349	Matthew Andrews.
Princeton, Ill.....	584	17	555	520	93-7	79	223	C. P. Snow.
Allegan, Mich.....	554	19	457	394	86	233	101	Albert Jennings.
Shelbyville, Ill.....	523	20	445	352	79	194	69	Jephthah Hobbs.
Polo, Ill.....	540	15	473	449	95	22	265	J. H. Freeman.
Chas. City, Iowa.....	459	15	416	377	90-3	395	138	Irwin Shepard.
Marengo, Iowa.....	425	19	394	364	94-9	88	180	C. P. Rogers.
Knoxville.....	365	77	294	258	87-8	.....	.....	M. H. Ambrose
Noblesville, Ind.....	387	18	312	291	93-2	2	157	Jas. Baldwin.
Albia, Iowa.....	357	19	340	316	92-9	109	164	Cyrus Cook.
Normal, Ill.....	338	17	315	302	95-8	88	135	Aaron Gove.
Rochelle, Ill.....	351	18	330	319	96-3	27	186	P. R. Walker.
Henry, Ill.....	299	16	279	254	91	98	80	J. S. McClung.
Lexington, Ill.....	298	17	282	266	93	366	68	Daniel J. Poor.
Martinsville, Ill.....	233	17	218	183	91	75	48	C. M. Johnson.
DeKalb, Ill.....	279	15	260	245	93	127	127	Etta S. Dunbar.
Shelfield, Ill.....	241	15	226	211	94-8	43	113	J. A. Mercer.
Toledo, Iowa.....	218	9	192	177	90-7	43	169	A. H. Sterrett.
Maroa, Ill.....	175	16	148	134	90-2	.....	39	Jas. Kirk.
Yates City, Ill.....	192	19	174	160	92	102	.....	A. C. Bloomer.
New Rutland, Ill.....	139	15	118	109	92-3	46	52	Walter Hoge.
Lyndon, Ill.....	142	17	131	113	86	64	29	O. M. Crary.
Earlham, Iowa.....	86	19	78	72	95	70	26	J. W. Johnson.
Denison, Iowa.....	89	19	86	75	87	164	20	Z. T. Hawk.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

are sometimes bad, but we do not whip them. Would you know how we avoid the use of the rod? Listen:

THE FOLLY OF FLOGGING.

In managing the schools of a large city without the use of corporal punishment, a few things must be taken for granted: That the public schools are not reformatories; that good children deserve a little of the teacher's attention, and that the whole working of the system should not be regulated in the interest of the bad; that all teachers have a little common sense (a rash assumption, but quite necessary); that the State should provide for the blind, mute, idiotic and vicious, outside the public schools; that the parents of the district, and not the teachers, are the fathers and mothers of their own children, and that, as being authors of their own being, they have a little interest in their welfare, and are, in a small degree, responsible for their conduct; that moral contagion

is as bad as physical, and that instant removal of the affected party is the best policy; and so forth, and so forth.

The teacher's province is to inform the mind and mould the character by precept and example; all menial offices belong to the parent, such as washing, combing, flogging and the like. These latter would be blessed acts in many cases, but *they are not in our grade.*

The parent who requests a teacher to flog his child is too low in the scale of creation to be ever anthropomorphous. If any flogging is needed in a family, by all means flog the head of it, and there is no danger of missing the real culprit. Parents can not be pleased by any mode of discipline practised towards their children; if you strike one part of the body they claim that you ought to have struck another part; if the part was proper they cry out against the instrument used; if the part and instrument are all right, there is something wrong with the offence for which you punished; if all the above are correct, fault is found because the child of somebody else wasn't whipped. *Moral:* Touch children seldom in kindness, and never in unkindness.

The arguments used in favor of moderate whipping can all be used in favor of moderate drinking. The only safe, dignified and respectable course in either case is—total abstinence.

If a teacher tries to make up for the weakness, depravity, bad management and foolish notions of all the parents in his district, he takes a heavy contract upon his hands. In correcting vice, teachers always defeat themselves by attempting too much. You can be in your school-room a policeman or a judge. By refusing to whip children you take from them one of the incentives to misconduct—the desire to see how near they can approach a whipping without “catching it,” and their desire to show pluck if called out to be flogged. Half the misconduct of children is for the purpose of trying the teacher, to see what foolish thing he will do. Show children that they do not disturb you and their mischief dies out for want of a purpose. But if you are attacked, fight in self-defence, and if a parent comes to ask you to whip his child, be sure to kick him off the premises. This advice is not given in joke.

The worst use a principal of a school can be put to is to make a thrashing-machine of him.

The State gives children the privilege of being educated; the price of that privilege is good behavior.

A fair business-like course works best with children. “I am the master; you are the workmen; I want no fooling in this shop.” Coaxing and moral suasion are worse than whipping. A reprimand for trifling offenses; instant suspension for direct disobedience, improper language, or writing, or any pointed personal insult to the teacher.

Suspension is not a panacea. Is flogging? As you flogged ineffectually so you may suspend ineffectually; but one suspension as a disciplinary force is equal to the effect of fifty whippings.

Is it a confession of weakness to suspend? But the state sends its suspended pupils to prison, and the church ex-communicates—suspends. Nay, even christianity, that great scheme of redemption, had to construct a Hell for its incorrigible pupils, and the Catholic portion of the Christian church has its reform school in Purgatory. Barbarism flogs; civilization suspends.

And now Old Rod, farewell! You're not the only wicked thing that defied Igno-

rance and degrading Dogmatism inflicted on us. "Brisk bringer of brats' brimming brine, bad, blistering birch, begone!"

It is true that children of ten deserve a whipping; but who does not? We quote from memory: "Treat them not according to their deserts; for, treating thus, say, who should 'scape a whipping? Treat them according to thy own honor and dignity." It is a satisfaction to punish children when they irritate us. But repressing such impulse is just the means of enabling us to govern easily. We become the greatest of rulers—we govern ourselves.

At the Principals' Meeting, Jan. 11, the question for discussion was, "What can be done with, or for, such pupils as seem particularly or wholly incompetent to pursue with reasonable success the required course of study?" The following points were brought out in the course of the debate: That it is difficult to determine what is dullness in children, since slowness of apprehension is often mistaken for stupidity; that the number of really dull children is very small, being not more than one in a hundred; that many pupils, apparently dull, need only time for mental growth to prove themselves possessed of capacity; hence, many children unable to pass the required examinations in the lower departments of school, by being allowed to pass on with their class, are often the most substantial scholars in the upper grades; and, on the contrary, the brightest and most precocious children are often the veriest dunces in after years.

It was argued that our system requires that dull children be educated; that in large schools it is not necessary to form classes of slow children for special instruction, since such naturally gravitate to the lowest class in the grade; but that wherever they collect, there the best teaching talent in the school should be employed. It was generally agreed that there should be two classes in the mind of the teacher, though they be not otherwise separated, viz.: the bright and the dull pupils; and that the latter receive the teacher's most earnest attention. The subject for consideration next month is "Special Teaching," or "The Departmental Method."

NATIONAL EDUCATIONAL ASSOCIATION.

STATE HOUSE, NEW HAVEN, CONN., }
January 10, 1873. }

The Thirteenth Annual Meeting of the National Educational Association will be held in Elmira, New York, on the 5th, 6th, and 7th days of August, 1873. Free return tickets are already promised on the N. Y. & Erie and the other railroads entering in Elmira. A cordial invitation to hold the meeting in that city has been received, signed by the mayor and aldermen, and sixty-five prominent citizens, including judges, editors, presidents of banks, clergymen, lawyers, and the officers of Elmira College. A warmer welcome was never promised to the Association. No effort will be spared to render this meeting interesting and profitable. A large attendance is anticipated. Details as to railroad and hotels facilities, topics and lectures will be seasonably given.

BIRDSEY GRANT NORTHROP,

President.

S. H. WHITE, *Secretary.*

MICHIGAN.—The State Teachers' Association met at Jackson, the day after Christmas. We should judge by what printed reports we have seen, and by the remarks of one who was present, that the main feature of the meeting was the address of Prof. Joseph Esta-

brook, on Normal Schools. An evident intention on the part of a few has been to assail the Normal school of Michigan. The sayings of some of these belligerent writers have been bitter and, sometimes, even venomous. We are not personally acquainted with any of them, but at this distance, some of the writings sound like others, we have seen from disappointed men, vulgarly called sore-heads.

We are glad that Mr. Estabrook had an opportunity to say his "say," and we rejoice too that the verdict is so unanimous in his favor. Now will our Michigan neighbor start for the enemies to the public free high-school in his State.

INDIANA.—The State Teachers' Association held its eighteenth annual session at Logansport, on the first three days of the new year; the preliminary exercises were held on the last evening of 1872. We learn that the attendance was very large, and included a good number of the more prominent teachers of the state. The address of welcome was given by Rev. M. M. Post, of Logansport, himself a veteran teacher; the response was by Hon. B. C. Hobbs, temporary chairman. President Bell's opening address, an able paper, dealt mostly with the work and position of woman as an educator. Wednesday afternoon was given up to work in sections. The failure of Prof. Tingley, of Greencastle, to present a paper as announced, before the college section, gives occasion, in the paper before us, for some very severe remarks concerning a lack of interest, and of a wide-awake spirit on the part of those men who are engaged in college work.

OREGON.—We have received a copy of the new school law of Oregon, passed last October. It seems to us crude; and some of its features are very objectionable; while in other respects it is excellent. The provision for the support of schools is very liberal; the 16th and 36th sections of each township, are set apart for support of schools; the county courts are required to levy a tax of three mills on a dollar for school purposes; and, in addition, the districts may levy school taxes. The law provides for a State superintendent to be elected every four years; his salary is fifteen hundred dollars per annum, besides office and traveling expenses. He is required to hold a teachers' institute in each judicial district, and at the State capital, at least once a year. County superintendents are to be chosen every two years; their compensation is fixed by the county court; each school district chooses a board of three directors, one going out of office each year. In school district meetings, "women who are widows, and have children to educate, and taxable property," may vote. The district schools must be free to all children between the ages of four and twenty years; and the teachers are required by law, to teach from 9 a. m., to 4 p. m., with an intermission of one hour at noon, unless the directors shall order a less number of hours.

The State Superintendent, the Governor and Secretary of State, constitute the State Board of Education. This board have the power to grant two grades of State diplomas, and two grades of State certificates. Diplomas of the highest grade are good for life, and those of the second grade for six years; State certificates are good for two years, and six months, respectively. The diplomas may be revoked for unprofessional conduct. The fees charged for State diplomas, and certificates, range from \$2.50 to \$10. In the examination of teachers, the board may call to their aid, four professional teachers; and the results of the examinations must be published. County superintendents, also, grant certificates; but, in case they do the candidate "injustice," he may appeal

to the State superintendent, who has the right to grant the certificate. Uniformity of text-books is secured in a curious way; the State superintendent is to send circulars to the county superintendents, on which they shall indicate their preferences for a text-book in each study, and return the circulars; the State board shall proclaim the text-book in each branch having the highest number of votes, as the authorized text-book in that study. Books so classed, shall not be changed for four years. At the end of that time, the circulars are again sent out, but no book shall then be changed unless a *majority* of the county superintendents shall agree as to its successor. It will be seen that the law has some very curious provisions; one other, that might have been mentioned, is that, requiring the county superintendents to form the school districts. We think, however, the provision respecting text-books, the most objectionable of all; our friends, the publishers and book agents, have sufficient temptations now; we are sorry to have their virtue subjected to additional trials, even in far-off Oregon.

ILLINOIS.—The State Teachers' Association met according to announcement at Springfield, on Christmas, and held its sessions three days. Notwithstanding the severity of the weather and the presence of the holidays, the attendance was good—greater than at Dixon, last year. The citizens of Springfield were not present; probably the numerous gatherings in that city of various guilds, trades and professions is sufficient reason for their non-attendance at a pedagogical meeting. To the Board of Education, and especially to the Principal of the high-school—an ex-president of the association—the members owe thanks. The programme was not *completely* carried out as printed. Some one is probably blamable for the omissions. In order to determine just where the fault lies, each failure must be named and the details mentioned. We have not space to do this, but will mention one. Several months before the meeting, Gov. Palmer *agreed* to be present and address the association. It was thought that this was proper; the Executives of Massachusetts and Wisconsin are accustomed to recognize the teachers' associations of their respective states. In times that are past our own Gov. Yates did himself, and us, the honor to address the association. It was understood that our Governor had a chronic habit of failing to fulfill engagements, but as the meeting was to be held near his home, there was reason to expect him this time. After waiting on the evening appointed, till after the hour for his coming, the chairman of the executive committee waited upon him at his residence, and was met with a polite but peremptory refusal to go to the hall. This was the first intimation he had given of his intention not to speak. It would have kept him from his home nearly thirty minutes to have spoken to the teachers of his own state. We believe Mr. John M. Palmer had a right to do a thing of this kind, but that the Gov. of Illinois had not. Our consolation must be that no fear exists of similar ill treatment for the next four years. The educational interests of the State have now in the executive office a man who would scorn to retard the work of free schools, either by law quibbles, by luke-warmness, or superciliousness.

The two prominent features of the meeting were the county superintendency and the papers of Dr. Patton and Dr. Edwards. Hon. W. Woodard, presented a paper on the first, which we wish our legislators could hear or read. The discussion which followed, resulted in the appointment of a committee to meet the committee on education in the legislature and urge the importance of an efficient county superintendency. A circular, the work of that committee, appears on another page.

The papers of the two eminent gentlemen brought out a full house on Friday morning. Several college and denominational school men, we noticed, that had not been present before. The papers had apparently been prepared with great care and with such ability as but few men in our State possess.

The SCHOOLMASTER need not express an opinion of the argument. On the part of denominational schools no new points were made. It is believed that in the paper of Dr. Patton was contained the *gist*, the essence, of all opposition to the public free high school. Certainly the author has no superior as a writer, probably no equal in the ranks of denominational school men. If he was answered at Springfield, and those who heard the papers will judge, then these chronic howlers must start again from a new base. Dr. Edwards never pleased his friends more, than when he stood before the teachers of Illinois, a champion for the public free school, from the primary school to the university.

J. L. Pickard, of Chicago, was elected president, and J. W. Cook, secretary, of the Association for 1873. John Hull, E. L. Wells and Robert Allyn, D. D., were made Ex. Com. The next meeting is at Bloomington.

The SCHOOLMASTER expects to present many of the papers read there, in the present volume.

McHenry County.—The school house in Howard took fire one cold day in January, from over-heated flues; timely discovery and prompt measures saved the building with but slight damage. Faulty construction and careless management have wrought sad havoc with the school houses of the West; and the citizens of this enterprising town may well congratulate themselves that, unlike many of their neighbors, they have not merely a heap of ashes in place of a fine school house.

NOTES.—1471 persons met a violent death in New York city in 1872; of these, 57 were from homicide; 140, from suicide; 209, from sun-stroke; 206, from drowning; 735, from accident, and most of the rest from infanticide.——It is said that fully seventy per cent. of the students at Oxford are not really *students* at all, but “luxurious, indolent and uninterested tenants of college rooms.” In summer, they do not even pretend to study. \$850,000 are spent annually, on about two thousand pupils at the two great universities of England; and most of it is worse than wasted. Is it any wonder, that a storm of discontent seems to be *rising*?——1872 brought about 300,000 immigrants to our shores; two-fifths of them were from Germany; about one-fifth from Ireland; and nearly as many more from the rest of Great Britain.——On November 30th, 1870, the State of Illinois owed a bonded debt of about \$5,000,000; on the same date of 1872, this debt was reduced to about \$2,000,000. At the same time, there was a balance in the Treasury of about \$2,000,000. The income to the State from the Central Railroad amounts to nearly \$500,000 annually.——The State Normal School at Bridgewater, Mass., contains 139 pupils; the boarding-house is found too small to meet the demands upon it.——Dr. Harvey P. Peet, well known for his labors in instructing the deaf and dumb, died at New York on new year's day; he graduated at Yale in 1822.——Oberlin College has 1,171 students; of this number, 634 are in the preparatory department.——At a meeting of the National Academy of Science, held at Cambridge, Nov. 22d, Prof. Agassiz characterised the Darwinian theory as a “mine of mere assertion.” He said of its supporters, “They have not shown Evolution, or the

power of Evolution, in the present day, and hence are not entitled to assume it in the past."——Rev. Joshua Leavitt, D. D., assistant editor of the *New York Independent*, died Jan. 17th. Many years ago, he prepared a series of school readers, one of which we well remember as a companion of our juvenile school days.——Bulwer, the novelist died on the 19th of January; he was in his sixty-eighth year.

ILLINOIS NORMAL.

D. E. NEWCOMB, who taught four years very successfully in Goleonda, Ill., is now in business in Pueblo, Colorado Ter. He gave us a call in Normal recently, on his way to his western home. He remarked to us that he preferred teaching to business, but couldn't *afford* to teach. Perhaps, people will learn sometime to pay teachers so that young men of talent can afford to remain teachers.

JOSEPH CARTER, who graduated at the Normal University in 1870, has just been appointed by the Governor, a member of the State Board of Education; he is the second graduate who has received that honor.

GRATIOT WASHBURN, formerly a member of the Model Department, has just been appointed Secretary of Legation to Paris.

JAMES HOVEY has left Normal, and gone to Washington, D. C., to enter on the study of the law.

Gen. CHARLES E. HOVEY, first President of the Normal University, was admitted to practice in the United States Supreme Court, in January.

WASHINGTON D. UNDERHILL is teaching in Chattanooga, Tennessee.

NATHAN FORD, Esq., for some years a very successful teacher in Lena, Ill., is now Principal of the Yankton Academy in Dacotah Territory. The new building of the Academy was dedicated on New Year's evening. It is said that Mr. Ford is doing a good work in his new field. To those who knew him in Illinois, it will be easy to believe this story.

BOOK TABLE.

No notices are ever inserted in this department, for which a price is paid. The BOOK TABLE of the SCHOOLMASTER is entirely independent of outside influence. Books are discussed upon what appears to the reviewer to be their intrinsic merits. The primary object of our book notices is to give to our readers the benefit of the opinion of the SCHOOLMASTER. All books sent to us are thankfully accepted; we are desirous of receiving all new works. The reviews may not always be just, but they certainly will come from the pens of fair dealing and unprejudiced persons, and will be written only for the benefit of others, never for pecuniary reward.

The Art of Teaching School, by J. R. SYPHER, J. M. STODDART & Co., Philadelphia. 317 pp. duodecimo; price \$1.50.

In this work, the author attempts a pretty wide range; he discusses the general subjects of education and discipline, school authorities, organization, management

methods of instruction, and text-books. On all these topics, he says many true and important things, albeit they are not very new, and not always said in the best way. He justly condemns the too great multiplicity of school studies receiving attention at one time; but we seriously doubt that, "there are few graded schools in the cities and villages throughout the United States, in which pupils are not required to recite in from ten to fifteen, or even a greater number, of branches of study every week," p. 92. We do not fully agree that, "in the recitation of a lesson, the onus is upon the teacher." The *onus* of the recitation proper, should be wholly on the pupil; if instruction is given, of course the work falls largely on the teacher. The table of phonic elements on p. 141, is not as good as it might be, and its arrangement is very faulty. The theory, on p. 154, that a "few simple rules, learned and applied," will give the pupil the ability to read well, we wholly disbelieve. We venture the broad assertion that no pupil ever did, nor ever can, learn to read well by learning and applying *rules*. In his methods of instruction in arithmetic, while he gives many good hints, he commits very serious blunders. He subtracts a *figure* of the subtrahend, from a *figure* of the minuend. He finds cases where the divisor is not contained a number of times *into a figure* of the dividend, p. 181. He defines a fraction as a "part of a unit." He says, "to divide a fraction by a whole number, the purpose is to decrease the fraction as many times less one as there are units in the divisor," p. 190. We may be dull, but this sentence means absolutely *nothing* to our mind. He gives nine pages to Proportion. Our experience is, that Proportion is wholly without value, as a means of finding arithmetical results. He proposes oral lessons for "one or two weeks," to give little pupils a preparation for the study of geography in the ordinary text-books. Had he said two terms, or two years, we would say "amen." Nevertheless, we believe young teachers will find the book quite helpful in suggesting new thoughts, and better ways of doing their work.

The Etymological Reader, by EPES SARGEANT AND AMASA MAY. Philadelphia, E. H. BUTLER & COMPANY.

A book of 480 pp. for the use of the class, in reading. The new feature, as the title indicates, is etymology. Extensive lists of prefixes, of suffixes, of Saxon and Latin and Greek roots with English derivatives, with an excellent etymological introduction, are contained in the first sixty pp. In the appendix more than five thousand words are given in tables, with references to the page in the body of the work, where the particular history of the word with its etymology is written. The book closes with a complete list of authors, with nationality, date of birth and death of each. Aside from the etymological features of this Reader, it is of superior merit, in this, that the selections are carefully made from *standard authors only*: but the study of words, as here introduced in connection with their use, makes this Reader of great value to the teacher who would have the language of his pupils definite and pure. So far as we know, this is the only reading-book that has attempted this line of work. Many good teachers will welcome it as a great assistance to a kind of labor they have hitherto been compelled to do, unaided by any text-book save the dictionary. The grade of the book is about that of fifth or sixth reader.

The Merchant of Venice; GINN BROTHERS, Boston.

This is one of a series of Shakspeare's Plays, taken from H. N. Hudson's "School Shakspeare," in pamphlet form. This form is convenient; the print is clear and good;

the editor's notes are not very extended, but very valuable. The price is forty cents a number; so that by getting a few of these pamphlets bound, one can secure a choice volume of the best of Shakspeare's Plays, of reasonable size, at moderate cost, and enriched by notes from the pen of, perhaps, the ablest student of the great poet, in America, if not, in the world.

The Century Book; by JOHN M. GREGORY, LL. D., ADAMS, BLACKMER & LYON PUB. CO., Chicago.

This book is a set of blanks prepared after the author's excellent "Map of Time." The plan is simple and ingenious, as all know who have examined that map; it is intended that pupils by filling these blanks shall fix the dates,—that troublesome and much-abused work,—by giving them a place, remembering them by the help of the eye and hand, and not by the sheer effort of the unaided memory. The use of the book is practicable with all students of any department of history.

A Smaller School History of the United States, by DAVID B. SCOTT; HARPER & BROTHERS, New York.

This pretty little book of 235 pp. is well illustrated with pictures and maps. The pictures are small, but neatly engraved and very instructive. The story of our country seems to be well told, and in simple language. Besides the story, the book contains chronological and other tables; the Declaration of Independence, and the Constitution and Amendments thereto. The general chronological table at the end is an excellent feature. At the close of each chapter, is a series of capital review questions. We will point out a few errors which we hope to see corrected in future editions. We think Massasoit should not be pronounced *Mas-sas'-o-it*, p. 31,—nor Faneuil, *Fan'-il*, p. 82. The grant to Oglethorpe and others was merely "in trust," p. 53. Both commanders did not "join Gen. Wolfe," p. 73. The honor of the capture of Ticonderoga should not be given wholly to Benedict Arnold, p. 88. Not *Philip* Livingston, but *Robert R.* was a member of the committee to draft the Declaration, p. 94. The American commander did not permit "Andre to write to Arnold," p. 111; he wrote himself. Breed's hill was not fortified instead of Bunker's, *by mistake*, p. 87. Brandt was not with the Indians and Tories at the massacre of Wyoming, p. 104. Lee was not *compelled to fall back*, at the battle of Monmouth, p. 103; Lee was a traitor. Page 37 gives the idea that Maine was first joined with Massachusetts in 1692, it was forty years earlier. On p. 122, we read 1786 for 1796; on p. 143, *Madison*, for Monroe; on p. 144, *John Adams* for John Q. Adams, on p. 158, we have *will* for shall. We do not know any reason for spelling *Tecumtha*, on p. 129.

Many of these errors are, doubtless, typographical; some of them are found in most of our school histories; but they should not be left to disfigure so nice a little book.

English Lessons for English People; by Rev. EDWIN A. ABBOTT and J. R. SEELEY. ROBERTS BROTHERS, Boston.

This little work of 300 pp., price \$1.50 will be found very helpful to teachers, and all others who are so anxious to understand how to use our language that they are willing to study for it. Let all teachers ponder the following gem from the preface: "It is difficult to exaggerate the value of a process which makes it impossible for a pupil to delude himself into the belief that he understands when he does not understand." The

range of subjects treated is quite large. First, we have an excellent discussion of the meaning and methods of *definition*. We then have a presentation of "Words defined from usage." The next chapter, "Words defined from derivation," gives quite a full presentation of suffixes, affixes, roots and derivatives. The next chapters treat of "The diction of Poetry" and "The diction of Prose." In the next chapter, "Faults of diction," some of the most common and worst errors of our language are sharply and clearly exposed. This is followed by chapters on "Simile and Metaphor," "Meter," "Selection" and "Arrangement;" these constitute quite a nice little treatise on Rhetoric. The last chapter, "Hints on Errors in Reasoning," gives a clear outline of logic. The whole is concluded with about twenty pages of review questions. By way of criticism, we would suggest that "too familiar for here," p. 72, hardly graces a book on language. On the whole, we heartily advise all teachers to get this book, and *study it carefully*.

Guyot's Physical Geography; SCRIBNER, ARMSTRONG & CO. NEW YORK.

We have received advance sheets of this work; the paper is excellent, the type, clear and beautiful, the illustrations, appropriate and well-executed; and, as far as we can judge from these fragments, the treatment of the subject will be highly satisfactory. The issue of the book is expected about the twentieth of March.

Common School Arithmetic on the Analytical System, by SHELTON P. SANFORD, A.M., Professor of Mathematics in Mercer University, Georgia. Philadelphia, J. B. LIPPINCOTT & Co., 1873.

Self-interest will by and by compel publishers of school text-books to "have by" some person competent to expose the essential defects of manuscripts offered for publication. An author's title of professor is not a guaranty for truthfulness of statement even, to say nothing of well-written English, logical analysis, or wise arrangement of topics.

We do not fear that the work now under review will enter our Illinois schools; nor, on the other hand, dare we hope that whatever of truthful adverse criticism it may receive at our hands will reach the eyes of all teachers and school boards in other states, for whose favorable regard the author and the publishers have doubtless been laboring. Nevertheless, we cannot put by the book unnoticed.

This arithmetic is not without merit. Paper, printing, and proof-reading are altogether acceptable, and the binding is passably good. Several of the topics are well treated; a few of the analyses appear to us faultless; and the numerous examples, so far as we have observed, are suited to the grade of pupils for which the work is intended; but we have seen no modern book that furnishes more instances of loose statement, illogical analysis, and exceptionable phraseology.

Here let it be premised that the occurrence of an inexact phrase in a mathematical text-book can not be defended on the plea that the phrase is used by other authors. Nine authors out of ten may write of "changing a fraction of a HIGHER denomination to an equivalent fraction of a LOWER denomination," while but one of the ten ventures to define the topic with accuracy, by omitting four words: "changing a fraction to an equivalent fraction of lower denomination." Is it not apparent that the use of the two words "higher" and "lower" in the common utterance implies an intervening denomination? With the nine, each new unit may be "10 times greater" than the pre-

ceiling; with the one, "10 times as great." In most of the traditional phrases our author is with the nine. Of the proportion, 6:18::24:72, he says, "The fourth term is 3 times greater than the third, just as the second is 3 times greater than the first." Truly, "just as;" for, in each case, the value is 2 times greater than that with which it is compared. Under Evolution we are told that, "when we square it (the "root-figure") as so many tens, the square will be 100 times larger than the square of the same number of units." No, it is 99 times larger; or, better, 100 times as large. Of like character, but possibly more obvious in its error, is the explanation given to the problem, "If a pound of rice cost 10 cents, what would be the cost of 4 pounds? *Analysis.* To answer this question, we must repeat the 10 cents, *or add it to itself*, as many times as there are pounds." Again, "annexing one cipher to a number increases its value 10 times." There is *one* increase, not ten; the annexing occurs once. True, the effect of that act is, to show ten times the former value.

It would be requiring too much, to insist that a text-book of Arithmetic should teach the science of grammar or of logic. Yet we may justly require that it shall not vitiate or weaken. Vagueness, prolixity, false syntax, irrational deductions—these surely should find no place. What profit have we from so much of the following quotation as we here enclose in brackets? "It is immaterial which of two factors we use as the multiplicand, [or which as the multiplier, for in either case the resulting product is the same]." What quality of brain is to be helped by any one of the following? "When the divisor is not contained in any partial dividend, write a cipher in the quotient, prefix *it* to the next figure, and divide as before." "Sometimes the units or the tens, or both, may be wanting. In such cases we supply *their* places with *a* cipher." "How many whole ones and *parts* of a whole one are there in 20-sixths?" " $\frac{4}{5} - \frac{2}{3}$. We cannot subtract *these fractions* in their present shape." "If we analyze the process, we *will* discover a law." "If one-seventh costs 5 cents, seven-sevenths, or a whole pound, *would cost* 7 times as many cents, which *WILL BE* 35 cents."

Does Prof. Sanford really believe that "in dividing a fraction by a fraction" compound fractions *must* be reduced to simple ones before inverting the divisor?" Will his pupils who have been well trained in "analysis" blindly accept the declaration that "in all computations of discount it is necessary first to find the present worth?" or, that "to understand" Cashier Sawyer's Rule for finding the face of a note yielding at bank a specified sum, "requires some knowledge of Algebra?" We suggest that some knowledge of algebra *is* requisite to understand such a form of "analysis" as our author gives, commencing, "The whole amount to be insured may be *represented* by $\frac{100}{100}$, or 100 per cent." Indeed, *this* is quite like algebra; especially as the 100 per cent. (representing the unknown) is carried on as an arbitrary representative, to the end. Why not say that the sum to be insured *is* 100 per cent. of itself? Why this holding off, as at arm's length, all numerical relations and processes? Do we fear that familiarity will breed contempt?

We quote, lastly, in evidence of the author's inconclusive logic: "When a number or thing is divided into equal parts, these equal parts are called FRACTIONS. *Hence*, a FRACTION *is an expression representing, &c.*" "Reduce $\frac{2}{3}$, $\frac{3}{4}$, $\frac{5}{6}$, & $\frac{7}{8}$ to their least common denominator. *Analysis.* A little examination of the denominators of these fractions will show us that they can all be contained in 24. Hence, 24 is their least

common multiple." This seems like a smooth track; let us try it for a moment: A little examination of these denominators will show us that they can all be contained in 48. Hence 48 is . . . ! "3 is contained in 12 four times How do we know this? Because 3 times 4 are 12!"

We want no more arithmetics that add and divide *figures*; that regard one thousand as "ten times larger" than one hundred; that ask "how often" 4 "goes into" 12; that pronounce an answer "10 times 100 small;" that confound *shall* and *will*; that teach pupils to "borrow from the upper number and pay back to the lower;" that multiply by feet and inches; that practice beginners on such dangerous stilts as "increasing and decreasing in a tenfold ratio;" that, unwittingly aspiring to the realm of algebra, "represent the required number by 100 per cent;" that display the analytical banner on the title-page, and then proceed to quench every spark of reason in the child, by deluging him with *non-sequiturs* like this: "Since the interest for one year is \$5, for 4 months it will be one-third as much as for a year;" or, that stupidly confound *per cent* with *cents*: "If on \$1 there is paid 2 per cent., or .02, then on \$9756 there must be paid 9756 times as much = $\$9756 \times .02 = \195.12 ." That is, 6 times 2 per cent. = 12 cents!!

M.

PERIODICALS.

The *Western Rural* is pre-eminently the agricultural paper of the interior. Of ample size, ably edited and beautifully printed, it offers to our farmers reading of *practical value* as well as interest. The subscription price is \$2.50 per year—with the Schoolmaster \$3 co.

The *Atlantic Monthly* commences its thirty-first volume with the number for January. This volume, judging by the initial number, will in no particular be inferior to preceding ones. Probably no magazine now before the people can number as many standard English authors as can the *Atlantic*. In the issue before us we have *Robert Dale Owen*, *J. T. Trowbridge*, *Lucy Larcom*, *Mrs. E. Agassiz*, *Oliver W. Holmes* and *James Parton*, with others. The reviews of recent literature, of art, music, science and politics are conducted with ability. We can send *The Atlantic* and Schoolmaster for 1873 at \$4.50.

Appleton's Journal presents to its readers all the features of a monthly, issued in a weekly form of 32 pages. It is well illustrated, contains one first-class serial, short stories, picturesque descriptions of places and narratives of travel. It is a journal of popular high-class literature, and ably holds its own among the very best periodicals. It costs \$4 per year—with the Schoolmaster, \$5 00.

The *American Naturalist*. This magazine, published at Salem, Mass., is one of the few able and successful scientific periodicals in the United States which depend on original communications for support. The present number embraces contributions from various gentlemen of scientific note, foremost among them being "Certain Peculiarities in the Crania of the Mound-Builders," by J. W. Foster, LL. D.; "On the Relation between Organic Vigor and Sex," by Prof. Henry Hartshorne; and an article by Prof. N. S. Shaler, on the geology of the country adjoining Narragansett bay. The scientific

notes at the close of the volume are of great interest, and the papers generally of value and ability.

THE LENS; a Quarterly Journal of Microscopy and the Allied Natural Sciences, Vol. I. No. IV., S. A. Briggs, editor, Chicago. It seems to us that this journal must be almost *indispensable* to microscopists, especially in the west. Most of the leading articles have direct reference to the scientific use of the microscope; but, in the fifteen pages of the editor's table, there is a large amount of matter valuable to one who is interested in any department of scientific study. The paper, typography and general appearance of the work are highly creditable; we sincerely hope it may obtain a patronage which will justify the great outlay that it must of necessity impose upon the publishers.

The Journal of Speculative Philosophy, Vol. VI., No. 10., W. T. Harris, editor, St. Louis. Although much of the matter in this magazine may be hard reading to one not well acquainted with German philosophy, almost every number contains articles of interest and value to the general reader, and especially to the teacher. The number before us has an article, by D. J. Snyder, on the "Merchant of Venice," which is very suggestive, and will be readily appreciated by every student of Shakspeare. But the article on "Pedagogics as a System," by Dr. Karl Rosenkranz of Konigsberg, translated by Miss Anna C. Brackett, is well worth the careful study of all educators. We think persons interested in the *science* of education would do a good thing for themselves to send for this particular number, even if they do not become constant subscribers to the journal.

Scribner's Monthly for January, promises well for the new year; it contains articles by Bryant, Higginson, Eggleston, Mac Donald, Bret Harte, Sax Holm and other eminent writers. "The one-Legged Dancers," is a charming story, complete in this number; the same may be said of Eggleston's "Christmas Club." "New ways in the Old Dominion," and "How Stanley found Livingstone," are fully illustrated. Nature and Science, the Book Reviews, etc., are interesting as usual. The first-class novel now-a-days must discuss the school question in some form. Accordingly, Dr. Holland gives us his ideas of proper school management, in this installment of his story of Arthur Bonnicastle. We wish all teachers could read the arguments he puts into the mouth of Mr. Bird, in favor of the responsibilities of well-behaved pupils in assisting the teacher to suppress evil doings in the school. We think he pretty effectually demolishes the old opinion that pupils are bound in honor to conceal the misbehavior of their comrades.

PUBLISHERS' DEPARTMENT.

It is announced elsewhere that we have bought the *Illinois Teacher*; and that hereafter, the two Journals will be published in one, under the name of ILLINOIS SCHOOLMASTER. We shall add not less than six pages to each number, and shall exert ourselves to make the new magazine all that the teachers of Illinois can reasonably ask, at the same time that we continue our care for the wants of our subscribers in all parts of the north-west. Our expenses will of necessity be increased; this compels us to raise

our subscription price to that of other Journals of our class, viz: \$1.50 per year, or \$1.25 to clubs of five or more. Payment must always be made *in advance*; we send no *dunning* letters; when your subscription expires, if you do not renew, we understand that you do not wish the SCHOOLMASTER. Those who send us \$1.00 after this date will receive eight numbers instead of twelve, for the money. For other particulars concerning premiums, &c., see our advertising pages.

We hope, when any mistakes occur in sending the SCHOOLMASTER, or when any change in the direction is desired, our subscribers will give us prompt notice, remembering always to state your *present post-office*. Send money to us in P. O. orders; they can be drawn on Normal.

We call the special attention of teachers desiring books that will help them professionally, to our advertisement. The list is not exhaustive; but we wish it understood that every one of these books is heartily recommended by the SCHOOLMASTER, from our own personal knowledge. They will be sent post paid on receipt of the prices named; which, in all cases, are the regular prices of the publishers. We will also send any other good book in the market on the same terms; we will not send trash, if we know it, on any terms. We will send six dollars worth of any ordinary text-books, the one ordering, paying express charges, and will also send him the SCHOOLMASTER for one year, *free of cost*; the books will be sent at regular retail rates.

Owing to our changes, this number of the SCHOOLMASTER is a little late; in future, we expect to mail as we have done, about the 25th of the month.

N. B. All matter must be in our hands by the 15th of any month to insure insertion in the next number.

Among the many evidences of prosperity in the *New Chicago*, and probably the most gratifying to the educational public, is the return of leading book houses to anti-fire localities. The following card just issued by a well-known publishing house, and to which the attention of *teachers* is particularly invited, will explain itself.

Notice of Removal.—We take pleasure in announcing to our friends that we have removed into our new store, Nos. 113 & 115 State street, where we have abundant room for offices and stock, and shall hereafter keep on hand a larger supply of our publications than ever before. Our new location is central, and in one of the finest business blocks in the city. We shall at all times be pleased to see teachers, and hope they will not fail to visit us whenever they are in Chicago. We have a comfortable room where they will find on file all the educational journals of the country, and where they can write their letters, meet one another, and have ample opportunity to examine our publications.

The NATIONAL SCHOOL FURNITURE CO., sole manufacturer's of *Peard's Folding Desk and Seat* for schools have offices with us, and will keep a large supply of school apparatus of all kinds. Samples of school desks, teachers' desks, chairs, globes, maps, charts, etc., will be open to inspection, and we bespeak for them a share of patronage from western educators.

Thanking the teachers of the west for their favors of the past, and trusting to extend our acquaintance with them in the future, we are,

Very Respectfully,

A. S. BARNES & CO.

Dec. 1st, 1872.

Price's Mathematical Chart is a valuable aid in the primary school. It saves much labor on the part of the teacher, and by its novelty interests the little folks. Send to A. H. ANDREWS & Co., Chicago, for full description.

The publishers regret that it has been impossible to prepare the *SCHOOLMASTER* this month in its completed new dress. Delay in receiving type and the extra work caused by the consolidation of the two magazines is the cause. It is expected that the next number will be satisfactory to the subscribers, both in appearance and time of issue.

We know the following are good books; the prices annexed are the regular retail prices of the publishers. We will furnish them *post paid* on receipt of the price. If those who order five dollars worth or more at a time, choose to have them sent by express at *their cost*, they may remit to us at ten per cent. below the prices named.

Page's Theory and Practice of Teaching,	\$1.50
School and Schoolmaster,.....	1.50
Lippincott's Gazetteer,.....	10 00
Goold Brown's Grammar of Grammars,.....	6.50
Guyot's Earth and Man,.....	1.75
Guyot's Geographical Teaching,.....	75
G. P. Marsh's Man and Nature,.....	3.00
Porter's Human Intellect,.....	5.00
Porter's Books and Reading,.....	2.00
Sheldon's Elementary Instruction,.....	1.75
Tenney's Natural History,	3.00
Trench's English Past and Present,	1.25
Brocklesby's Meteorology,.....	1 25
Gentle Measures in Training the Young,.....	1 50
Fowler's English Language,	2.50
Hooker's Child's Book of Nature,.....	2.00
The same in parts, viz: Animals, Plants, Air, &c., each,.....	90
Hooker's Natural History,.....	1.50
The Student's Hume's England,.....	2.00
Arnold's Lectures on Modern History,.....	1.50
Tyndall's Forms of Water,	1.50
Herbert Spencer's Essays on Education,.....	1 25
Worcester's Quarto Dictionary,.....	10.00
Worcester's Universal and Critical Dictionary,.....	3 50
Worcester's Comprehensive Dictionary,	1.75
Webster's Quarto Dictionary,.....	12.00
Webster's National Dictionary,.....	6.00

ILLINOIS TEACHER, {
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER.
Volume VI.

ILLINOIS SCHOOLMASTER.

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VOLUME VI.

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NUMBER 58.

DO YOU LOOK AFTER THE LITTLE THINGS?

If one should look into the causes of the many failures that constantly take place about us, I think it would appear that in every instance there has been a lack of careful attention to details. The shiftless farmer, whose corn is choked by weeds (which are very small at first), and whose crops are destroyed by the inroads of unruly beasts, is not wanting in attention to the great duties. He makes a show of putting in his crops at the proper time. He runs his lines of fences about where they should be. He goes through the motions of successful farming. But his work is superficial; it is wanting in thoroughness. He is, perhaps, supplied with all necessary implements: but he has not given rigid attention to them in detail. A tooth is lost out of the harrow; the pin is gone from the clevis of the plow, and these *little* things are not observed until the implements are needed for use; so that men and teams are kept in idleness for hours, and it may be for days, waiting for an insignificant job of repairing. One panel of fence has been left unfinished. What a little thing compared with the great work that has been done,—the countless panels that have been made secure! But during the silent hours of some night a famished herd breaks through the insignificant opening, and the labors of a season are lost in an hour.

And it is the same with an untidy house-keeper. The unloveliness of her parlor, the positive filth of her kitchen, the general slovenliness of all her surroundings, children included, are due, in the beginning, to

a carelessness about the little hidden blotches of dirt, that have expanded at last, like the leprosy, into an all-pervading disease.

Illustrations of this principle crowd upon us from every occupation and mode of life. How many a merchant has been ruined by his indolent neglect of the details of his business! How many a battalion has been cut to pieces on the field, because the irksome duties of cleaning guns and brightening bayonets had been overlooked! How many a general has found himself flanked and overpowered because he had been too lazy to make a thorough examination of the topography of the locality, and did not know of that little gorge in the mountain ridge through which the enemy has stolen a march on him! Napoleon III found himself crushed at Sedan, not because his plans had been ill-laid, and the generalizations of the campaign were faulty, but that disaster came upon him because he had not taken pains to, know with positiveness and in detail, the exact condition of his own army. There had been an absence of thoroughness in the drill. The men had not been rigorously held to the little duties of the parade-ground, the camp and the guard-room. Among the officers even, there was ignorance of localities and routes. The general direction of the Prussian frontier they knew, but the precise road to be taken, and the exact obstructions to be overcome, were unknown. Many of the Prussian rank and file, we are told, were better acquainted with the topography of northern France than colonels and captains in Napoleon's army. Never was there a more striking illustration of the principle we are considering. Almost every other element of success was present on the French side. There were able generals, there was the prestige of victory, a fierce enthusiasm was burning in the heart of every soldier, there was an overwhelming confidence of success; but the Second Empire was wanting in genuine, conscientious, painstaking attention to details; and, as a consequence, it fell!

The same is found to be true in the culture of mind and soul. What is a superficial religious life, but a life that consists in mere generalities,—that carelessly concedes the great truths of Christianity, but fails to make a thorough, personal, practical application thereof? What sort of a student is he who is satisfied with "a general notion" of the subject under consideration? How much ignorance is covered up, though very thinly, in school work, by a voluble utterance of

“general principles”! What agonizing is often developed by the effort to show how these “generalities,” not always very “glittering,” apply to the actual cases that occur in life!

Let it not be inferred from these remarks that we consider generalization as of little worth, and believe that general principles may be safely ignored. Nothing of that sort is intended to be taught. But we desire to enforce two truths, each of them somewhat important. The first is, that that element of total depravity called laziness, gets its mightiest grip upon men when they enter upon the drudgery of details. About generalizations there is something inspiring. Far-reaching views stir the blood by their imposing grandeur. There is an expansion of soul corresponding to the breadth of the view. And so the faculties are awakened; the mind’s lethargy is thrown off, and mental effort becomes a pleasure. But when we come to the details, to the little things that shine with no glory, but yet demand a steady strain of mental labor, we find our enthusiasm, like Bob Acres’s courage, oozing out at our fingers’ ends. The stimulus to labor, being no longer furnished by the grandeur of our work, must come, if at all, from an untiring strength of purpose,—from a resolute, conscientious self-control. And these, unfortunately, are qualities in which the mass of mankind are sadly deficient. And thus it comes to pass that men are lazy, not in forming and contemplating lofty views and grand achievements, but in the drudgery of uninviting and inglorious details. Many a man would exhibit commendable diligence in running for the presidency, who would show little pertinacity in a cornfield, with a hoe in his hand, or at a desk studying the elements of mathematics.

The other truth that we desire to emphasize is, that the chief business of most men is with details. Most of the work of this world is done by men who are unable to see the end from the beginning, or to take in at one view the entire scope of the work which they are doing. The journeyman carpenter makes his mortises and cuts his tenons, and sees, perhaps, little more than the piece of timber on which he works. But the architect carries in his head, not alone the work of this man, but that of hundreds besides; and sees, not one stick of timber, but the entire structure in its grandeur and beauty. The architect, however, is only one, and the workmen are many.

And this is true even in the building up of sciences. Agassiz gene-

realizes grandly. He takes in at one view species and genera, orders and classes. But that he may do it successfully, a thousand men, many of them mere tyros in science, must scour the country for turtles' eggs, and with microscopes watch their developement from day to day. What would the deductions of the great philosopher be worth but for the drudgery of this army, who furnish his facts?

Time was when teachers, as a class, generalized very little. Each one, knowing little of his brethren or their ways, performed his own duties with whatever of faithfulness belonged to his character. There was an art of education, and but little of a science. But in these days the order is almost reversed. The science of education rages like an epidemic. Many have caught the disease. At every cross-road a "professor" may be found competent to explain it. Teachers' institutes, whose members are ignorant of the very rudiments of their work, and even of the subjects which they are trying to teach, spend precious hours in listening to the unfolding of systems and schemes, which, however true, are not what the mass of the listeners most need to know. Books are continually coming from the press, setting forth extended systems of instruction, involving the use of all knowledge, and addressed to persons who know little more than the alphabet.

Under these circumstances, it is not strange that teachers are too careless about thoroughly *observing* their own work in its details. They do not weigh their words. They do not consider their acts. Words are spoken and acts are performed by the the teacher continually, not because they are demanded by the circumstances, or adapted to produce given results, but because they happen to be the first that occur to him. If he feels inclined to scold, he does it, without ever inquiring whether the difficulty in hand can best be removed by scolding. Careful, conscientious observation of the actual movements of the school-room;—this is the thing needed, and this is the thing so lamentably wanting. How few teachers are able to give a well considered and faithful account of their own methods of instruction and discipline! How many there are, who, if asked to tell how they teach a given subject, will give some ideal process, learned from some theorist, instead of that actually employed every day! The fact is that the details of our work are a drudgery to us. They are exactly the thing that we would escape if we could. We cannot even bear to think of them

continuously. And yet, upon the right manipulation of these depends, in a large degree, our success.

It has been found an excellent practice for young teachers, or for those preparing to be teachers, and having classes in an experimental school, to keep a complete and accurate diary of their work. In this is recorded everything done in the recitation; every point presented in the lesson: every effort made to arouse the sluggish, to regulate the erratic, to improve the use of language, and to maintain a cheerful and spontaneous order. All failures are noted, including those of the pupil in recitation, and of the teacher in explanation, or in the maintenance of discipline. All successes, too, are marked,—successes in attempts to interest pupils, in attempts to concentrate thought, in attempts to improve the manners of pupils, in attempts to establish good English as the habitual speech of the class-room, and genial sunshine as its pervading inspiration. Such a record makes it possible to discuss, afterwards and at length, the steps taken in the class. It is also exceedingly convenient in adjusting reviews. But its chief value consists in the fact that it compels the young teacher to give attention to the details of his work—to study his processes with minuteness and precision.

In older communities and especially in foreign countries, where the channels of industry are more distinctly marked, the danger with most persons is in the direction of a too exclusive attention to details. But in these busy Western States, where every man is ready to undertake any enterprise, we feel sure that the thing most needed is a more conscientious attention to details.

RICHARD EDWARDS.

DIRECTIONS FOR MAKING AND PACKING SPECIMENS OF NATURAL HISTORY.—II.

MAMMALS.

The collector of mammals will learn to rely chiefly upon the use of traps. For animals of a small size, common mouse-traps may be set near stacks of wheat, shocks of corn, piles of rails, etc., and baited with corn, cheese, potatoes or other attractive food. Steel-traps are suitable for the larger species, or the “box-trap” or “dead-fall” may

sometimes be substituted. Many mammals, large and small, may be taken by exposing their favorite food poisoned with strychnine. The burrowing animals may be "drowned out" or dug from their holes, and occasionally the shot-gun may be used.

Mammals should be killed by breaking the back or by compressing the sides, so as to stop the breath, but *never* by any process which will injure the skull. The hair should be freed from blood with plaster, in a manner similar to that recommended for cleaning birds.

It is well to make a memorandum of the four following measurements: from the tip of the nose to the base of the skull and to the root of the tail, and from the root of the tail to the end of the tail and to the tip of its hairs.

One who knows how to skin a bird will easily skin most mammals with very little further instruction. The incision should be made along the middle of the abdomen, from the root of the tail about one-fourth the length of the body. The legs should be treated precisely as in birds. The tails of most animals smaller than the fox need not be skinned, but the bone should be cut off close to the body. To remove the bone from a tail of larger size, "pass the slip-knot of a piece of strong twine over the severed end of the tail, and, fastening the vertebræ firmly to some support, pull the twine towards the tip until the skin is forced off." If the skin is too firmly attached to the bone to be thus removed, it must be opened its whole length, and, after the bone is taken out, sewed up and stuffed. The skull should be entirely removed, with the least possible injury to the eyelids and lips, the brains scooped out through the hole at the base of the skull—or left in, if this is too small—and the bone freed from all flesh. The skull should be marked so as to show the skin from which it was taken. The inside of the skin must be covered with arsenic, the leg bones wound with cotton or hemp, the skin turned right side out, the head and neck filled out with cotton, and the whole neatly folded and left to dry.

I add the following directions for skinning large animals and those having horns, from Maynard's Naturalist's Guide :

"In skinning large animals, make an incision in the form of a double cross, by making a longitudinal cut between the hind legs, from the root of the tail to the breast between the fore legs; then a transverse cut from the knee of the fore leg down the inside of the leg to

the opposite knee. The same operation is repeated upon the hind legs. Then proceed as before, only, when the skin has been removed from the flanks, the animal must be suspended to facilitate the removal of the rest."

"In skinning a mammal with horns, make a longitudinal incision from the back of the neck to the occiput, or back of the head; then make a transverse cut across the head, commencing about four inches beyond the right horn and ending about four inches to the left of the left horn, the cut passing close to the base of the horns, thus forming a T. Remove the skin from the body as far as the neck, which is cut at its junction with the body. The skull, horns and neck, are drawn through the above-mentioned orifice."

"While skinning the legs of ruminants, such as deer, sheep, etc., it will be found that the skin cannot be drawn over the knee-joint; then cut longitudinally through the skin below the knee, and, after severing the bone at the hoof and knee, remove it through this incision. The incision should be about one-fourth the length of the distance from the hoof to the knee."

Many small species may be very easily preserved in alcohol. An incision should be made in the abdomen, to allow the spirit to penetrate the tissues. Skins of mammals may be packed for shipment like those of birds.

REPTILES AND FISHES.

Most reptiles can be skinned according to the directions given for mammals. In preparing turtles, the breast-plate may be separated from the shield of the back with a knife or saw, and, everything being removed from within except the head, legs and tail, these should be skinned and cleaned as directed above. The preservative should, of course, be freely applied, the bones of the legs and tail wrapped with cotton and restored to their places, the neck stuffed, and the two halves of the shell brought together. A snake may be very quickly prepared in the following manner: Open the mouth as wide as possible, and sever the back-bone and the flesh about it from the *inside*, close to the base of the skull; then push the end of the bone through the mouth, tie a string to it, and strip the skin downward to the tip of the tail; sprinkle with arsenic, turn it right side out, stuff it with bran, and put it in any desired position.

The skin of a fish may be taken off by making a longitudinal incision nearly the whole length of the body, either beneath or on the left side, separating the skin from the flesh in both directions, and cutting off the tail and fins from within and the head at the gills. The brains and eyes must be removed, the skull, orbits and skin covered with arsenic, the latter turned right side out, stuffed with cotton and sewed up. The fins should be stretched while moist, upon a piece of stiff paper, which will hold them in position until dry.

All specimens of these two classes are much better preserved in alcohol, unless of too large a size ; but the above instructions may be of use when alcohol cannot be obtained.

S. A. FORBES.

THE PERSONAL RELATIONS EXISTING BETWEEN THE SUNDAY-SCHOOL TEACHER AND PUPIL.

Sunday-School work at length has a history ; and this history shows the work to have been a mighty instrument in moral and spiritual culture.

Men look back thirty, forty—yes, fifty years, to the lessons learned from the Sunday-School catechism, for the source of many of the purest motives of their lives, and are glad to testify to these good influences, though they then came through a medium very unattractive to youthful minds, and often very incomprehensible to older ones. The powerful instrument of culture that this history proves the Sunday-School to have been, even with its poor management, should lead us to a careful study of its mechanism, to find wherein its motive power lies, to make better that which is already good, and to dispense with that which is superfluous. Theories concerning Sunday-School work are many, but all necessarily center about this one consideration—the *personal relation existing between teacher and pupil*. Around this as a center, details innumerable and various may cluster, but it is itself the main-spring, the moving power, in accomplishing lasting good.

God has endowed his children with perceptive faculties, with reason, judgment ; but, in his loving kindness, he has given more than these, or rather, the crown of all—the spiritual powers. These every

soul possesses, though they are often hidden or dormant, under the control of the lower nature, or they are left to smoulder beneath a hardening crust, because no careful hand has made an opening through which the spiritual oxygen, necessary to feed the flames, may find its way.

The average child of our Sabbath-Schools knows as little of this soul power within himself, as the seed shell does of the tiny but marvelous embryo within its brown cover; and the work of the parent and teacher is not alone the development of the perceptive and reasoning powers, but, as the perfection of these, the education of the spiritual nature, whose exercise will prepare the child for the truest life on earth, as well as the happiest in heaven.

The teacher, realizing the responsibility of this work, feels as though the task were more than could be borne, and his oft repeated and anxious query is, "How can I do what is best?" And to the conscientious Sunday-School teacher comes how often the same question, and always unanswerable. Unanswerable, I say, for it is impossible for the teacher to tell, even when his experience proves that he has been successful in his work, *how* it was done; for it is this subtle, indescribable influence going out to the pupil from the teacher—an influence realized by neither at the time—which is the moving power in the heart of the child.

Christ taught his disciples in words that we are hearing every day; but with how much less of fervor do they fill us than they did the disciples, warmed and thrilled by the presence of their loved Master, whose divinity went forth with his words in sublimest oratory. True eloquence speaks not alone in the words uttered, but in the deep yearning to do good which accompanies them.

Some considerations may be stated worthy of especial notice in regard to establishing such a relation between teacher and pupil, that the one may receive good and the other may give the most in his power.

1st. The teacher ought to be acquainted with his pupil; that is, he should know something of surroundings at home; something of intellectual abilities and acquirements, and also of the progress made in spiritual attainments, which will, doubtless, in ordinary cases, be very slight. And here the greatest possible care and tact is important; for, to the sensitive natures of many children, any apparent attempt to gain

such information, only raises a barrier, rather than removes one, and endangers the possibility of reaching another desirable end, which is, that the pupil should honor and respect his teacher. This is the second point to be established, and here we find the necessity of goodness and purity on the part of the teacher; for all close students of human nature soon learn that it is only true worth that children respect. Theirs is the quick intuitive insight that looks through any screens down to the true motive; which, if a good one, they have faith in, but if not, they distrust, although they may obey. The child himself does not know that he possesses this power, but it is his safeguard in making friends before he reaches years of discretion, and cannot be overlooked by those who wish to incite love and respect.

Again, the teacher must do right because it is right, and must have a deeply settled desire to do all that he can for each pupil in his care; this desire should not be intermittent, but steady and strong. This is an end by no means easy to attain. All who have tried the work know how many are the disappointments hard to bear, because they come so often from one's own lack of discrimination or energy; but no good comes from dwelling upon discouragements; success lies in forgetting the things which are behind, and pressing forward to that which is before.

Thus, wisely forgetting, let us look to some of the results springing from the above-mentioned causes; namely, the teacher's knowledge in regard to the pupil, the respect and love of the pupil for the teacher, and the acting from right principle on the part of the teacher.

By knowing the habits and surroundings of his pupil, the teacher is often able to assist him in some way, perhaps little, but enough to manifest good will; he thus gains his confidence, slowly but surely, and consequently learns more in regard to his needs. This process goes on, and the cord between teacher and pupil strengthens, and such friendship springs up as will last through a lifetime—yea, more, will reach forward to the eternal life.

Again, as a result of such friendship, the pupil finds one to whom he can go in confidence; for, sad to say, in many cases, children cannot confide in their parents as they would. Indeed the need of such a friend is sometimes of *vital* importance, and how happy the child, who, longing for a confidant, finds one in a true teacher; one to whom

he can look up ; one who can advise and direct aright in the ways dark to young travelers, and one who he knows feels an interest in his welfare, and whom experience has proved to be his friend.

I think if every one of us, grown to adult years, could look carefully and thoughtfully to the lives we lived, from the years of ten to fifteen, perhaps we should find that the greatest need we then realized was of some one who appreciated the wants of our natures ; desires beyond mere physical wants, and yet so illy defined in our own minds that the desires themselves seemed illy, and left us in doubt and perplexity. It is just here that the true prayerful teacher finds a work incomparably great, and which brings a reward beyond comparison ; this is not alone for the Sabbath-School teacher, but is more especially his work, as his particular field is in sympathizing with the boy or girl that is beginning to learn that living means more than the satisfying of physical wants, and that there is within himself a looking and longing for something not yet found, some power to sustain, some hand to guide. There is nothing easier to read than the faces of children ; and tacit in leading out from the lips what has been already seen in the face, is a power in the hands of but few, but one which is potent for good. The teacher may find one of his class who is alone, one who is bound to no other by those ties which make life desirable ; here certainly is a field ready for the worker.

Cases innumerable could be cited, but little can be said to assist one, except that he who wishes to establish a bond between himself and pupils that will draw both closer to the Great Father, can look to One alone for example and guidance—guidance which will never mislead,—to Him who saw through the ragged garments of the beggar and through the sinning woman's sin, down to the heart, and beheld there a germ of good which He cherished and caused to spring forth and bear fruit. Children learn to love God by loving their friends ; in teaching his pupils to love himself by his true life and desire for their welfare, the teacher is lifting them nearer God ; since all true affection—all good aspirations, prepare us for a higher appreciation of the Good Father whose love and forbearance are beyond comprehension.

MARY E. COFFEEN.

SCHOOL GOVERNMENT.

One of the most difficult things to find among teachers is the ability to govern properly a school. Examiners generally consider literary qualifications of more importance than governing power, and annually certify teachers who are deficient in this essential. Children are sent to school to be governed as well as taught; therefore, teachers should be employed who can both govern and teach. There seems to be a diversity of opinion among teachers, as to what constitutes good government, and the means that should be employed to secure it. Some contend that fear should be the controlling element. Others that the rod should never be used. Our most enlightened teachers are of the opinion that corporal punishment should be inflicted only as a last resort. All recognize the necessity of force in the government of a nation; why not then in the school?

It is, I think, impossible for every teacher (and in some schools for any teacher) to get along without using the rod to some extent. Scholars who are hardened by the evil deeds of years, and who, if not corrected, would bring discord into the school, should be compelled, by corporal punishment, to yield obedience to just laws. Punishment should be inflicted in sorrow, rather than in anger. Children are quick to discern the spirit of an act. If the hand of the teacher is guided by passion, the child perceives it, and the punishment does more harm than good. If the child can be made to feel that its punishment is just, and is inflicted for its good, it will seldom rebel.

Teachers who threaten a great deal, and use the rod for every trivial offense, seldom keep orderly schools. The reason is, that the pupils brace themselves up against such tyranny, and secretly resolve to transgress whenever they have a chance. The only motive appealed to is fear, and the only feeling which stirs their breast is hate. Children should be made to feel that their teacher is not a tyrant who delights to command and punish, but a friend who is interested in their welfare. When they understand this, then they will strive to please and obey, and endeavor to show by their acts that they appreciate the kindness of their instructor.

School government consists in preventing, rather than punishing crime. The most efficient way to prevent mischief is to keep the schol-

ars employed. It is not enough to tell pupils to study. What do little children know about studying books? Children should be furnished with employment which will amuse as well as instruct. They should be early taught the use of pen and pencil. The hand and the eye should be cultivated together. Very young children can be taught to draw. Few teachers, however, have interest enough to introduce it into their schools. Teachers of tact and inventive genius can devise innumerable exercises for the pen and pencil of their pupils. Would that teachers took more interest in this matter!

Children should be taught to govern themselves. Lessons should be given daily in self-control. The best of all discipline is self-discipline. Teachers should study the character of their pupils, and endeavor to ascertain what their home influences are, and what their former treatment has been. A look or a word from the teacher should secure instant and cheerful obedience. The forces of nature work silently, yet they control the universe. So should the influence of the teacher pervade and govern the school. Harsh words, savage rebuke and brute force should never be employed. Kind feelings should exist between teacher and pupil. Those teachers succeed the best who appeal to the better natures of their pupils, and endeavor to secure their obedience by gaining their love. Love is the magic key which unlocks the secret chambers of the heart, and exerts a refining and ennobling influence upon the mind.

Teachers, think of these things. Manifest an interest in your pupils, not only in but out of the school-room. Show them, by your acts, that you sympathize with them. Encourage the sensitive and doubting ones. Dispel the gloomy forebodings that often oppress their hearts. Endeavor to lead them up to a nobler sphere of action, a higher range of thought. Fling the pure rays of hope along their way. Open before them pleasant paths, and teach them to avoid evil ways. Noble youths are often saved from ruin by a single kind word. Stubborn wills and hardened hearts have been melted and subdued by the power of love, and have caught from the lips of faithful instructors, words of encouragement and hope never to be forgotten.

Teachers, then, govern your schools, and govern them wisely; and when years shall have passed away, and your pupils enter life for themselves, you will see the result of your labors. The seed sown

will bear fruit. The words spoken will come to you again; and although worldly fame may not be yours, yet your pupils will cherish your memory, and will, in the judgment, "rise up and call you blessed."

ELIZA H. MORTON.

DEERING, ME.

LITTLE THINGS.

One step and then another,
 And the longest walk is ended;
 One stitch and then another,
 And the largest rent is mended;
 One brick upon another,
 And the highest wall is made;
 One flake upon another,
 And the deepest snow is laid.

So the little coral-workers,
 By their slow but constant motion,
 Have built up those pretty islands,
 In the distant, dark blue ocean;
 And the noblest undertakings
 Man's wisdom hath conceived,
 By oft-repeated effort
 Have been patiently achieved.

A little—'tis a little word,
 But much may in it dwell;
 Then let a warning voice be heard,
 And learn the lesson well;
 The way to ruin thus begins,
 Down, down like easy stairs;
 If conscience suffers little sins,
 Soon larger ones it bears.

A little theft, a small deceit,
 Too often leads to more;
 'Tis hard at first, but tempts the feet,
 As through an open door.
 Just as the broadest rivers run
 From small and distant springs,
 The greatest crimes that men have done
 Have grown from little things.—*Selected.*

ARITHMETIC.—II.

We saw in our article in the January SCHOOLMASTER how numbers are made. Our object now is to see how they are *grouped*, how they are *named*, and how they are *represented by figures*. The mind cannot conceive of large numbers, nor can it retain them, without some method of grouping them. We have already recognized the fact that the untutored mind cannot deal much with numbers without the aid of visible counters. This is shown by the constant tendency of young children, and of uncultured men, to resort to the use of their fingers in the simplest calculations. The fingers are the most natural and often the most convenient counters: and as we are supplied by nature with just ten of these counters, this probably explains the fact that we have learned to group numbers by tens. For instance, if a savage wanted to tell us that twelve men had just passed, he would probably show his ten fingers and thumbs, and then show two fingers in addition to the group of ten. But, whatever may have been the origin of the custom, we always group simple numbers in accordance with this principle: *That TEN units of one kind make ONE of the next higher order.*

In naming numbers, we give each new number a name, until we have given names to the first ten; after this, all the names seem to have reference to the principle of grouping just stated. We have learned to regard eleven as one ten joined with one of the first kind; or as such a number that, if ten be taken from it, one will be left. We think this fact is expressed in the word *eleven*, the last part of which is evidently related to the verb *to leave*. In the name *twelve*, the last letters have doubtless the same relation, while the first letters suggest the number two; hence twelve means "two left," that is, after ten are taken away. From thirteen to nineteen inclusive, the names are made in this way,—the last part is the word *ten* changed a little in form, while the first part is the name of the numbers three, four, etc., also changed slightly in some cases. The name *twenty* evidently means *two*, or *twain*, tens; and a similar meaning is found in *thirty*, *forty*, etc.; as far as *ninety*. As ten tens, according to our principle of grouping numbers, make a new one, we have a name entirely new, for their value. The names of numbers intermediate between any two of these last given, are so made as to indicate at once some number of tens joined with some number of units. For instance, *forty-four*, means by its form four tens and four units. In such names as *sixteen*, the part of the word meaning ten, takes the form *teen*; one ten is meant taken in connection with the number of ones indicated by the first part of the word. But, in *sixty*, the part of the word meaning ten takes the form *ty*; in this case the word means as many tens as the first part of it denotes, in this instance,

six. This difference in the formation and use of these two classes of words can be understood by quite young children; and it will aid them in the proper grouping and conception of numbers. Beyond ninety-nine, we give new names to new *orders* of ones only; in fact, beyond thousands, a new name is not given to every new order, but only to every third order; that is, we have thousands, tens of thousands, hundreds of thousands, millions, etc. This is according to the *French method*, which is commonly taught in our modern Arithmetics,—the method which will doubtless supersede every other at no distant day.

In writing numbers by figures, our practice has constant reference to the principles of naming and grouping, already indicated. We use a new figure to write each new number until we have expressed the first nine numbers; after that, we express all numbers by a peculiar use of these nine characters already learned. Ten being but a new kind of one, it is very natural that we should express it by some use of the figure 1; but how shall it be done? I have sometimes found it profitable to require a class to invent for themselves some method by which to show that the 1 has taken on a new meaning,—as by putting a dot over it, underseoring it, etc. The method actually adopted in our decimal system of notation is to give the figure its new value, by removing it one place farther to the left, or to give it a value depending on the place it occupies. As soon as figures receive this *ordinal* value, it becomes necessary to have a starting point from which to count their place. This is the proper time to make the pupil acquainted with the use of the *decimal* point, or “starting-point” as it may be called; it is absurd to defer this matter till we teach decimal-fractions. Now, to make the figure 1 express ten, or one of the second order, we put it in the second place at the left of the decimal point; hence, any figure in the second place at the left of the point should express units of the second order, or tens. Following the same principle, figures in the third place, should express units of the third order, or hundreds, etc. But, suppose our number is such—ten for instance—that we require no figure to fill one or more places between some figure and the decimal point; how shall we know in what relative place that figure stands? This brings us to the use of the zero or cipher; *a zero is used to fill a place that would otherwise be vacant, between the decimal point and some figure.*

It follows from what has been said, that a figure takes a value ten times as great as its present value, when it is moved one place farther to the left of the decimal point; if this removal would leave a vacant place between the figure and the decimal point, that vacancy must be filled by a cipher. But the use of the cipher *does not give the new value*; it merely *indicates* it; to

teach otherwise is to sow the seed for a great crop of misconceptions, as I too well know from experience. We perceive now that figures have two values, one determined by their shape, the other by their place in respect to the decimal point; the first value answers the question, *How many?* The second value answers the question, *What?* Why not call these two values, the "place-value," and the "shape-value?" I would certainly use these terms with young learners, instead of the terms simple, and local, value. We now have the machinery complete, by which we can write any simple number from one, upward. There are important things to be observed in the actual work of writing numbers, and in reading them, also. But this article is long enough; we will content ourselves for the present, by summing up some of the principles that we have presented, in a catechetical form.

How do we group numbers? *We group numbers by tens.* According to what law? *Ten units of one kind always make one of the next higher order.* What is a figure? *A figure is a character used to express a number.* How many, and what, values have figures? *Two,—a shape-value and a place-value.* For what is the zero or cipher used? *It is used to fill places that would otherwise be vacant, between some figure and the decimal point.* What is the law of increase in the place-value of figures? *When a figure is moved one place towards the left, its value is ten times as great as before.* We think this last statement can be fully understood by young children; and it covers the whole ground in respect to the place-value of figures, on both sides of the decimal point.

I have tried to state these simple things, not for the edification of expert arithmeticians, but in such a way as to aid inexperienced persons in laying a sure foundation in the minds of beginners,—a work of prime importance; but often badly done because of deficiencies in text-book and teacher also.

E. C. HEWITT.

Especial attention is called to the Circular from Superintendent Bateman. County Superintendents are urged to read and call attention of the school officers in their respective counties. It is lawful for Directors to subscribe for the SCHOOLMASTER and pay for the same from the public funds.

Domestic happiness, thou only bliss
Of paradise that has survived the fall!
Thou art the nurse of virtue.

EDITORS' DEPARTMENT.

The legislature of our State has under consideration several different bills, the object of which is to compel attendance upon our public schools. If any one of these bills is destined to become a law, we know of none that is less objectionable than the one prepared by Hon. H. W. Snow, chairman of the House committee on education; but we hope that our legislators will weigh the matter well before enacting any of these bills into a law. There is a growing disposition among us to rely upon the strong arm of the State for help in every enterprise, as if no good thing could be accomplished without the intervention of the law-making power with its pains and penalties for every neglect of duty. The assumption is as false as it is dangerous. If any principle may be considered well settled in our system of government it is this, that the sphere of individual action should be made as broad, and that of State action as narrow, as is compatible with the public welfare. But we are apt to become impatient over the slow process of growth and development by which alone communities rise to the appreciation of great facts and principles, and so we beset our legislative halls and clamor for a law to compel men to be what they are not, and what no amount of legislation can make them. As a result, we find our statute books filled with laws that are never enforced, and which only serve to perpetuate the memory of our own shortsightedness and folly, and to increase that want of respect for all law, which is by no means among the least of the dangers that threaten us. It would be well for us not to forget that there are many objects, in themselves most desirable and most excellent, which it is neither expedient, nor wise, nor just, to attempt to secure by legislative enactment.

We are aware that not a few among us seem to think that the grand panacea for all our educational ills is to be found in a compulsory law; but we confess that we are not of that number, and we are confident that a majority of the teachers of the State agree with us in our opinion upon this question. This subject has been before our State Teachers' Association on more than one occasion, and has there received careful and searching consideration, and we are glad to be able to record the fact that the teachers of the State of Illinois have never yet been led to declare themselves in favor of compulsory education. Let this fact be borne in mind, and let it be understood that it is not the teachers who are demanding or favoring this measure.

Our worthy State Superintendent devotes nearly forty pages of his last report, just published, to the presentation of the arguments in favor of compelling children to attend the public schools. He has treated the subject in his usually able and exhaustive manner, and the greater part of his argument commands our hearty assent. We believe with him that the State has the *right* to pass such a law; that education is the great preventive of crime, and that it is most desirable that all the children of the State should share the benefits offered by our schools. We do not agree with him that in considering the question, whether or not the people of the State favor such a law as is proposed, the burden of proof rests with those who oppose the

measure; it is rather for those who advocate the making of this experiment to show that public sentiment is on their side. Nor do we believe that a compulsory law would remedy the evils complained of, but, on the contrary, we do believe that such a law would be unwise, impracticable, and inoperative.

But we have not the time nor the space to enter upon a full discussion of this question. Other States are trying the experiment of a compulsory school law, and we are not aware that the result thus far reached is such as to raise any very high hopes in the minds of the friends of education. Would it not be the part of wisdom to wait a little while and see what may be the fruit of these experiments before rushing blindly into the same experiment ourselves? Let us rather give our efforts and energies to the work of improving our schools, placing in them better teachers, introducing more approved methods, and making them worthy of the patronage and support of all the people of the State. Until this is done, the State, though it may have the legal right, certainly has no moral right, to compel attendance upon its schools. It would not be necessary to go beyond the pages of our Superintendent's report to show that there are schools in our State which it would be cruel injustice to compel any child to attend.

Much of the efficiency of the teacher depends upon his daily reading. Without information of current events, live work in the class-room cannot be. A teacher recently told his class in geography that a canal had been constructed across the Isthmus of Panama. A regular perusal of an ordinary county paper would prevent such errors. It is possible that too many teachers are not well-informed with regard to the present. He who occupies a chair in a university can be a musty, antiquated book-worm, full of the subject which is directly in his line, and with room for nothing else, and yet do good work teaching.

But it is not so with the teacher in the public school. Topics, the discussion of which involve a knowledge of the present world, *will* present themselves, and must be considered.

The reading of one or more of the popular monthlies, too, ought to be the duty, as well as pleasure of us, each and all. Neither "no time," nor "no money," will do for an excuse for the neglect. We have time *always* to do what is duty, and a very few dimes will suffice to put in our hands, monthly, the *Atlantic*, *Scribner's* or *Lippincott's*. This last, one of the very best of all, costs our subscribers but two and a half dollars, although it is a four-dollar magazine; three dollars will furnish either of the others.

There is ever danger of the teacher's life being like that of one in a treadmill; this is one of the means afforded for varying the course of thought.

Sup't. Bateman, in his recent report, gives the whole number of teachers in Illinois at more than twenty thousand! How many of these thousands of teachers are taking a teachers' journal? It is certain that we have not the names of one-sixth of them on our subscription list. If they do not take the journal of their own state, what one do they take? The sad fact is, probably, that not one-fifth of them take any at all; and yet, perhaps, some

of these very persons are clamorous to be recognized as members of a "profession." Will not the leading teachers, and the County Superintendents exert themselves to remove this disgrace? With one-fourth of twenty thousand teachers in Illinois as paying subscribers to the *SCHOOLMASTER*, in addition to our large list outside the State, we promise you a better teachers' journal than is now published in America. We have already taken several new steps to increase the value of our magazine; each of these steps involves an additional outlay of money. Send in your names; give us the money to spend; and you will get the benefit of it.

We have received from the Bureau of Education the "Official Circular of Information" concerning the preparations now in progress, to have our educational methods and systems properly represented at Vienna next summer. The "Circular" gives full details of what has been done, and what is to be attempted, including the correspondence between Commissioner Eaton and the State and City Superintendents, the account of the meeting of the superintendents in Washington last November, the official programmes of the Vienna Exposition, etc. Gen. Van Buren, the United States Commissioner to the Exposition, says, "It is urgently requested by the Austrian authorities that we should present at the Exposition a model school-house, with its interior arrangements, maps, books, globes, and all the machinery and aids used in our Common Schools." Gen. Eaton makes an earnest appeal to school officers, and the managers of the higher institutions of learning to assist in the work of making the exhibition of our educational affairs, on that occasion, full and creditable.

The President, it seems, at the earnest solicitation of Senator Wilson and others, has just pardoned a young man who was sentenced to five years' imprisonment for a defalcation of nearly \$50,000. News comes of "stay of proceedings," "supersedeas," "respite," "pardon," "commutation," etc., in the case of one after another of the noted criminals who have experienced the uncommon fate of conviction, recently. And, with all this, we hear of new and greater defalcations and more horrible crimes against life, together with bribery and corruption on the part of men filling the highest offices in the land—all this, with an occasional account of mob violence, may well make us exclaim, "What are we coming to?" Will the teachers of the rising generation so train them that things will be better thirty years hence? What say you, brothers and sisters?

The wisdom of the committee on education in the Illinois House of Representatives, is manifest in the report adverse to a bill for uniformity of text-books in the public schools of the State. The amount of corruption that might follow the enactment of such a law is fearful to contemplate. California is suffering from such legislation. Oregon has recently incorporated such a provision into its school law. With well-informed educational committees in the legislatures, such foolishness can be avoided.

The *Chicago Times* criticises Dr. Bateman's recent Report, especially the part relating to Compulsory Education, sharply and coarsely. We are not fully converted to the belief that a compulsory law is expedient at this time; but we have some doubt that the abuse of the *Times* will either hurt the Superintendent or hinder the passage of the law.

THE APRIL SCHOOL ELECTIONS.

DEPARTMENT OF PUBLIC INSTRUCTION,
SUPERINTENDENT'S OFFICE,
Springfield, Illinois, Feb. 15, 1873. }

The near approach of the first elections of Township and District School Officers under the new law, renders it important to note the changes that have been made, so that no mistakes may occur. Particular attention is therefore invited to the following points:

ELECTION OF TRUSTEES.

1. *Time of Election.*—The first election of Trustees under the new law must be held on the second Saturday of April next, being the twelfth (12th) day of that month. This applies to all Townships, except those which are identical in boundary with the civil towns, as hereinafter explained.

2. *Notice of Election.*—The election, in every organized Township, must be ordered by the Trustees of Schools, as heretofore; the Township Treasurer giving notice of the time and place, by posting notices of the same at least ten days previous to the day of election, in not less than five of the most public places in the township.

3. *Judges of Election.*—The Trustees, if present, shall act as judges, and choose some suitable person to act as clerk. If the Trustees, or any of them fail to attend, or refuse to act when present, the voters present must choose from their own number such additional judges as may be necessary. No election is to be postponed on account of the absence of the Trustees, or of their refusal to serve as judges, nor is any election of Trustees to be proceeded with, without a full board of three judges, and a clerk, duly chosen.

4. *Opening and Closing the Polls.*—The polls may be opened, if so specified in the notice, at any hour between eight o'clock A. M., and one o'clock P. M., and the judges may close the election at four o'clock P. M. The polls must in all cases be kept open long enough to enable every elector, with reasonable effort, to vote; nor can the polls, in any case, be kept open less than three hours. The election must be conducted in accordance with the provisions of the general election laws of Illinois, defining the manner of electing magistrates and constables.

5. *Delivery of Poll Book and Certificate.*—The judges of election must, *within ten days thereafter*, cause a copy of the poll book of said election to be delivered to the County Superintendent of the county, with a certificate thereon, showing the election of said Trustees, and the names of the persons elected; and the County Superintendent must file and preserve said poll book and certificate, as the legal evidence of said election.

6. *Penalty for Failure.*—For failure to deliver a copy of the poll book and certificate, to the County Superintendent, *within ten days* after the election of Trustees, as

aforsaid, the judges will be liable to a penalty of not less than twenty-five nor more than one hundred dollars, to be recovered, in the name of the People of the State of Illinois, by action of assumpsit, before any justice of the peace in the county; and said penalty when collected must be added to the township fund of the township. The object of this provision in the law, is to stop the pernicious practice of postponing the delivery of the election returns to the County Superintendent, until, as often happens, the records are mutilated or lost, and the legal evidence of who are and who are not Trustees, is destroyed. County Superintendents of Schools are charged with the duty of seeing that the requirements of the law in this regard are strictly complied with.

7. *One to be Elected—Not Three.*—The impression has prevailed to some extent that, as all previous school laws are repealed, a full board of *three* new Trustees should be chosen at the first election under the new law. That is an error. Section 23 of the act provides that, "at the first regular election of Trustees, after the passage of this act, a successor to the *Trustee* whose term of office *then expires*, shall be elected," etc. The new law when it went into effect, in no manner changed the organization or membership of existing boards of Trustees, but continued and perpetuated the same. Hence, at the election in April next, only such vacancy or vacancies will be filled as may have occurred in each Board of Trustees, by expiration of term of office, removal, death, resignation or otherwise, just the same as if no new law had been enacted. In most townships there will be but one Trustee to be elected next April, namely a successor to the Trustee whose term of office will then regularly expire.

8. *Election of Trustees at Town Meeting.*—In counties having Township organization, in every township whose boundaries are the same as those of the town, the Trustee or Trustees must be elected at the same time and in the *same manner* as the other town officers; that is, at the same polls, on the same ballots, and in accordance with the same regulations; the town clerk giving due notice thereof, as of the election of other town officers. All elections of School Trustees heretofore held at regular town meeting, have been legalized by the General Assembly.

9. *Returns of Town Meeting Elections of Trustees.*—When Trustees of Schools are elected at town meetings, as mentioned in the preceding paragraph, the officer or officers whose duty it is to make returns of said town election, must make returns of such election of Trustees, to the County Superintendent of schools, within the time, and subject to the same penalty for omission, as is prescribed in the case of failure to make returns of other elections of Trustees.

10. *Election Blanks.*—To save time, secure uniformity and avoid mistakes in calling, conducting and making returns of elections of School Trustees and School Directors, it is recommended that *printed forms* of election notices, poll-books, tally lists and judges' certificates be procured, and used in every Township and District. Such printed forms will cost but a few cents for each election, being cheaper as well as a great deal better than written forms.

ELECTION OF DIRECTORS.

1. *Time.*—The next stated election of School Directors will be on the first Saturday of April, 1873, being the fifth day of that month.

2. *Notice.*—Notices of all elections of School Directors, in organized Districts, must be given by the Directors, at least ten days previous to the day of election. The notices must be posted in at least three of the most public places in the District, and

must specify the *place* where the election is to be held—the *time* of opening and closing the polls—and the *question* or questions to be voted on.

3. *Opening and Closing the Polls.*—Ample time must be allowed for all the electors in the District to vote. The hours of opening and closing the polls, as designated in the notice, must be strictly adhered to. The polls should in no case be kept open less than three hours. The election may be ordered to commence at any hour, not earlier than 8 A. M., and to close at any hour, not later than 7 P. M., *provided* that the time between the opening and closing, shall not be less than three hours as aforesaid.

4. *Judges of Election.*—In all elections of School Directors, there must be *two* Judges and a Clerk. Every such election should be ordered by the three Directors; when an election is so ordered, two of said Directors shall act as judges, and one as clerk. But if the Directors, or any of them, fail to order an election, or fail to attend, or refuse to act when present, then the legal voters, when assembled, shall choose such additional number as may be necessary to make up the full number of two judges and a clerk of said election.

5. *Returns of Election.*—Within *ten days* after every election of Directors, the judges must cause the poll-book to be delivered to the Township Treasurer, with a certificate thereon, showing the election of said Directors, and the names of the persons elected; which poll-book and certificate shall be filed by the Treasurer and shall be evidence of said election.

6. *Penalty for Failure.*—For failure to deliver the poll-book and certificate as aforesaid, to the Township Treasurer, within the said prescribed *ten days* the judges shall be liable to the same penalty as that prescribed in the case of failure to make returns of the election of Township Trustees, to be recovered in the same manner, and when collected, to be added to the District funds. Township Treasurers are charged with the duty of seeing that this provision of the law in relation to the prompt return to them of the poll-book and certificate of election, is strictly complied with.

7. *Report of Receipts and Expenditures.*—At the stated annual election of Directors, on the first Saturday of April, the Directors of every District are required to make, to the voters there present, a detailed report of their receipts and expenditures, for the preceding twelve months, and to transmit a copy thereof, to the Township Treasurer, within five days of the time of said stated annual election.

8. *Compensation of Clerks of Boards of Directors.*—Directors are authorized to use any funds belonging to their District, and not otherwise appropriated, to compensate the Clerk of their Board for duties actually performed; if they deem the amount of labor done sufficient to justify such compensation. When such compensation is made, it must be by the usual order on the Township Treasurer, signed by both the other Directors, and specifying the purpose for which drawn.

TOWNSHIP HIGH SCHOOLS.

“Upon petition of fifty voters of any school township, filed with the township treasurer at least fifteen days preceding a regular election of trustees, it shall be the duty of said treasurer to notify the voters of the township that an election “For” and “Against” a high school will be held at the next ensuing election of trustees, and the ballots to such effect shall be received and canvassed at such elections; and if a majority of the votes at such election shall be found to be in favor of a high school, it shall be the duty of the trustees of the township to establish, at some central point most convenient for a majority of the pupils of the township, a high school, for the education of the more advanced pupils. For the purpose of building a school house, supporting the school, and other necessary expenses, the township shall be regarded as a

school district, and the trustees shall have the power and discharge the duties of directors for such district in all respects : and, in like manner the voters and trustees of two or more adjoining townships may co-operate in the establishment and maintenance of a high school, on such terms as they may, by written agreement made by the boards of trustees, enter into."

As the next regular election of Trustees is on Saturday, the twelfth (12th) day of April, and as the petition must be filed with the Treasurer at least fifteen (15) days previous, it will be seen that in order to vote on the question of a Township High School at the next election, the petition therefor must be in the hands of the Treasurer by the 28th of March next, at the latest; otherwise no action can be had in the case for one year. Upon receipt of such petition, within the prescribed time, it will be the duty of the Treasurer, when he orders the election of Trustees, to also give notice that the question of establishing a high school, will then be voted on; or he may issue the latter notice separately. This is an excellent provision of the new law, and it is hoped that many Townships will avail themselves of it. It places the means of an advanced education within the reach of the people of every Township, without the expense and moral hazards involved in sending their children away from home to receive such higher education.

ELECTION OF BOARDS OF EDUCATION.

Very particular attention is invited to the following provisions of the 80th section of the school law now in force :

"In all school districts having a population of not less than two thousand inhabitants, and not governed by any special act in relation to free schools now in force, there shall be elected, instead of the Directors provided by law in other districts, a Board of Education, to consist of six members and three additional members for every additional ten thousand inhabitants, to be elected in the manner provided by section forty-two of this act for the election of School Directors. At the first election of Directors succeeding the passage of this act, in any district having a population of not less than two thousand inhabitants by the census of eighteen hundred and seventy, and in such other districts as may hereafter be ascertained by any special or general census to have a population of not less than two thousand inhabitants, at the first election of directors occurring after taking such special or general census, there shall be elected a Board of Education, who shall be the successors of the Directors of the district; and all rights of property and rights and causes of action existing or vested in such Directors shall vest in said Board of Education in as full and complete a manner as was vested in the School Directors. Such Board, at its first meeting, shall fix by lot the terms of office of its members, so that one-third shall serve for one year, one-third for two years, and one-third for three years; and thereafter one-third of the members shall be elected annually, on the first Saturday in April, to fill the vacancies occurring, and to serve for the term of three years."

It will be noticed that the above requirement is not permissive, but imperative and peremptory. The first election of Directors after the passage of the act, will be on the first Saturday (the fifth day) of April next, at which time, in every school district having a population of two thousand inhabitants, and not governed by any special act in relation to schools, a Board of Education, of not less than six members must be elected in accordance with the legal provisions quoted. The election must be ordered and conducted by the present Board of Directors, and in the notices it must be stated that the election will be for the purpose of electing a Board of Education, of six members, in lieu of the present board of three Directors, so that all voters having due notice may govern themselves accordingly. It must be distinctly understood that six persons are to be voted for and elected. It is to be an entirely *new* Board of at least six members. When the present Board of Directors have ordered and conducted the election, and the

Board of Education has been chosen, the present Board of Directors will cease to exist, and all their powers will vest in the new Board. Of course any or all of the persons composing the present board may be voted for and elected to the new Board, if the electors so desire. After the Board of Education has been elected, it must proceed to organize and take charge of the schools of the District, in the manner clearly and specifically pointed out in the 80th section of the act.

The friends of common schools and all good citizens are reminded of the importance of these approaching elections of school officers, and respectfully urged to give personal attention thereto, so that good and competent men may in every instance be chosen.

NEWTON BATEMAN,
Superintendent of Public Instruction.

EDUCATIONAL INTELLIGENCE.

CHICAGO —What with lazy janitors, bad coal and cold weather, the school children and teachers of Chicago have suffered during the month of February. By accurate computation, one dollar saved for coal is balanced by one hundred dollars paid out in doctors' bills. What a gratifying exhibit! How economical we are! But in the promise of additional accommodations given by the following report of the committee on buildings and grounds, we take a breath of comfort:

ESTIMATES OF COMMITTEE ON BUILDINGS AND GROUNDS.

Mr Sheldon presented the following report of estimates for the ensuing fiscal year, for new school buildings, which, on motion of Mr. Richburg, was laid over and ordered to be published:

To the Honorable Board of Education of the City of Chicago:

Your Committee on Buildings and Grounds recommends the following appropriations to be made for the purposes specified:

For rebuilding the Vedder Street School.....	\$30,000
For rebuilding Elm Street Primary School.....	30,000
For Third Avenue Primary.....	30,000
For a primary building near corner Twenty-sixth street and Wentworth avenue and lot.....	37,500
[An appropriation was made last year for a school on the corner of Thirty-third street and Wentworth avenue, of \$20,000. This is not wanted in this locality. It was located at this point because the city owned the lot; but it will not accommodate the people.]	
For a Primary Building near Twenty-sixth and Halsted street and lot.....	\$37,500
For Primary Building on Rolling Mill lot, additional.....	12,000
For Primary Building corner Harrison street and Western avenue, additional.....	10,000
For Primary building near corner Western avenue and Twenty-second street and lot.....	37,500
For Primary Building near corner Twelfth street and Centre avenue and lot.....	45,000
For Jones School, additional.....	20,480

The four twelve room buildings built during the summer of 1872, cost, including furnaces and furniture, as follows:

The Pearson street	\$32,142.54
The Kinzie.....	33,122.56
The Ogden.....	32,610.49
The Franklin	30,187.73

The estimate of the committee on salaries of teachers, is not without interest to the craft:

ESTIMATES OF COMMITTEE ON SALARIES.

Mr. Calkins, Chairman of the Committee on Salaries, presented the following estimates for the ensuing fiscal year, for salaries of Officers and Teachers, which was laid over and ordered to be published:

Your Committee on Salaries would respectfully submit the following estimates for salaries of Officers and Teachers for the ensuing year:

Present corps of Officers and Teachers.....	\$474,300
For additional Teachers for buildings in process of erection, and to be erected during the year.....	59,625
Total.....	\$533,925

The above estimate will have to be increased, however, if the resolution of Mr. Goggin, looking to an increase in the salaries of teachers, offered at the preceding meeting, goes into effect. It is evident that something must be done to obtain the requisite number of good teachers for the schools of Chicago. The bulk of those who come from the surrounding country fail to pass the examination, and of those who pass in scholarship, very few are competent in the practical work of teaching. Chicago has the name of producing arrogant people, but if there ever was a machine for taking the conceit out of folks, it is the public school system of Chicago.

Among the more valuable suggestions of Mr. Pickard, is to discontinue marking the daily recitations of pupils, but to make their scholarship average by their mark in their weekly written examinations. The project is looked upon with much distrust by the rank and file of the teachers in the city. Mr. Hanford, in his mathematical *role*, is still developing the idea of one.

At the last meeting of the Board, the President announced the death of Curtis C. Meserve, formerly a member of the Board of Education, and that the funeral had taken place during the forenoon of that day. Mr. Meserve was for a number of years principal of the Newberry School, and was highly esteemed by all who knew him.

The event of the month, however, has been the examination to obtain work to send to the World's Exposition at Vienna. The result of the examination is highly gratifying. The Superintendent has sent on six books, one on Physics, one on Language, one on History and Geography, one on Mathematics, and two scrap-books of drawing. Each book begins with Sixth Grade work, and concludes with the papers handed in by the pupils of the High and Normal Schools. The sheets of which the volumes are composed were written by pupils on the morning after the severest storm of this season, when many of "the best scholars were absent;" yet, both in appearance and average degree of accuracy, the work is quite creditable. The volumes are in full Russia binding, and a beautiful sight to look upon. These volumes were compiled in the following manner: All pupils of the six upper grades and of the High and Normal schools were examined. They wrote on sheets with questions printed on them, which were furnished by the board. A percentage of the papers of each grade was sent to the office of the Superintendent. There a further selection was made, and of this last selection, one-half the papers were taken at random and bound for Vienna, and the other half will be placed in the public library of Chicago. On the papers sent to Vienna appear the pupil's name, his age, average age of class, parent's occupation, time allowed for the exercise, and time actually used. On the whole, the volumes are the most honest, ingenious and creditable exhibit of school work we have ever seen presented to the public. Sprung upon the children as the examination was before the completion of their grade work, it tested them in the severest manner, and the questions were such as to try the reasoning power and ingenuity of the children, rather than what they had obtained from text-books.

The volumes sent to Vienna may be very interesting; but a collection of answers from the culled papers would show much more originality.

"Dew is the perspiration of the earth." "The dark red blood is changed to bright red blood by taking cod liver oil." "Three vegetables eaten uncooked are woollen stockings, blankets and drawers." This last answer should warn teachers from giving articles eaten and articles worn in the same grade. The working of the child-mind is truly wonderful.

REPORT OF ATTENDANCE FOR JANUARY, 1873.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
St. Louis	28,647	50	21,549	19,242	89	9,179	.....	W. T. Harris.
Chicago, Ill.....	32,405	20	29,314	26,228	83-5	13,075	.....	J. L. Pickard.
Cincinnati, O.....	24,886	20	21,042	20,015	95	5,384	.....	John Hancock.
Indianapolis, Ind	6,380	15	5,935	5,467	92	1,506	2,456	A. C. Shortridge.
Evansville, Ind.....	.....	.....	.....	.....	.....	.....	.....	Alex. M. Gow.
Dubuque, Iowa.....	.....	.....	.....	.....	.....	.....	.....	Thos. Hardie, Sec'y.
Springfield, Ill.....	.....	.....	.....	.....	.....	.....	.....	Jas. C. Bennett.
Terre Haute, Ind.....	2,490	20	2,325	2,093	90	1,662	513	Wm. H. Wiley.
Decatur, Ill.....	1,568	19	1,454	1,311	91-4	340	409	E. A. Gastman.
Freeport, Ill.....	.....	.....	.....	.....	.....	.....	.....	Chas. C. Snyder.
West and South }	1,128	20	1,070	968	90	273	308	{ J. H. Blodgett.
Rockford, Ill., } .....	.....	.....	.....	.....	.....	.....	.....	{ O. F. Barbour.
Darville, Ill.....	1,477	19	944	819	86-8	389	168	J. G. Shedd.
Alton, Ill.....	954	20	825	751	91	377	166	E. A. Haight.
Lincoln, Ill.....	1,059	19	675	566	82	567	21	Israel Wilkinson.
Ottumwa, Iowa.....	734	20	502	478	95	317	76	L. M. Hastings.
Marshalltown, Iowa.....	633	20	584	541	93	97	251	Chas. Robinson.
East Denver, Colorado.....	627	20	517	454	87-6	1,154	96	F. C. Garbutt.
Cedar Falls, Iowa.....	632	18	573	496	86-6	758	121	J. K. Sweeney.
Macomb, Ill.....	.....	.....	.....	.....	.....	.....	.....	Matthew Andrews.
Princeton, Ill.....	.....	.....	.....	.....	.....	.....	.....	C. P. Snow.
Allegan, Mich.....	626	20	499	409	82	221	70	Albert Jennings.
Shelbyville, Ill.....	533	20	485	394	81	224	68	Jephthah Hobbs.
Polo, Ill.....	504	20	474	424	89-4	43	154	J. H. Freeman.
Chas. City, Iowa.....	444	19	409	380	93	537	116	Irwin Shepard.
Marengo, Iowa.....	419	19	390	323	85-2	95	84	C. P. Rogers.
Knoxville.....	317	22	289	256	88-4	.....	48	M. H. Ambrose
Noblesville, Ind.....	315	19	281	256	91-1	8	135	Jas. Baldwin.
Albia, Iowa.....	337	20	318	293	92	95	84	Cyrus Cook.
Normal, Ill.....	362	20	326	282	86	110	71	Aaron Gove.
Rochelle, Ill.....	370	19	341	318	93-1	40	143	P. E. Walker.
Henry, Ill.....	.....	.....	.....	.....	.....	.....	.....	J. S. McClung.
Lexington, Ill.....	.....	.....	.....	.....	.....	.....	.....	Daniel J. Poor.
Martinsville, Ill.....	.....	.....	.....	.....	.....	.....	.....	C. M. Johnson.
DeKalb, Ill.....	293	23	278	256	92	137	60	Etta S. Dunbar.
Sheffield, Ill.....	.....	.....	.....	.....	.....	.....	.....	J. A. Mercer.
Toledo, Iowa.....	245	20	221	192	86	153	.....	A. H. Sterrett.
Maroa, Ill.....	188	22	162	138	85-1	.....	41	Jas. Kirk.
Yates City, Ill.....	194	23	183	170	93	.....	114	A. C. Bloomer.
New Rutland, Ill.....	147	20	132	116	88	88	22	Walter Hoge.
Lyndon, Ill.....	145	22	132	97	73	115	10	O. M. Crary.
Earlham, Iowa.....	81	19	72	64	89	57	9	J. W. Johnson.
Denison, Iowa.....	110	15	98	77	78-5	81	21	Z. T. Hawk.
Benton, Ill.....	178	22	160	149	93	52	124	G. W. Hill.
Belvidere, Ill.....	233	20	274	252	92	58	99	H. J. Sherrill.
Escanaba, Mich.....	239	19	210	192	90	81	81	N. E. Leach.
Winchester, Ill.....	407	20	352	299	85	388	.....	Henry Higgins.
Blue Island, Ill.....	225	.....	.....	192	88	68	142	M. L. Seymour.
Princeton, Ind.....	20	.....	428	389	90-8	55	134	D. Eckley Hunter.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

MASSACHUSETTS.—The Boston Board of Education six months ago, purchased a lot in the center of the city, on which it is intended to erect new High School buildings; price paid for the lot, \$420,000. Boston is evidently going to ruin. Besides this lot notion, they are bankrupting the city by paying their School Superintendent \$6,000 a year, to do nothing but ride around in a buggy furnished him by the overburdened taxpayers. We predict that the historic New Zealander will soon stand on the top of Bunker Hill Monument, etc., etc.—*Cal. Teacher.*

NEW HAMPSHIRE.—Gideon L. Soule, LL. D., for thirty-four years principal of Exeter Phillips Academy, Exeter, N. H., has tendered his resignation to take effect at the close of the present school year. The trustees, in recognition of his valuable services, have in accepting his resignation voted him an annuity of \$1,200 per annum, and the house he occupies.

MICHIGAN.—The attack upon the County Superintendency in this State is not at all formidable thus far. But three or four counties—or rather bodies of respectable but not very far-sighted gentlemen assuming to speak for counties—have yet instructed their representatives in the State legislature to advocate its repeal; and we do not hear of any enthusiastic circulation of petitions for the repeal in any part of the State. The Senate and Committees on Education in both houses of the Legislature are safely constituted; and we think the friends of this important feature of our educational system need only be vigilant, not fearful. Upon this topic we have a timely communication from one of the leading Superintendents, which should receive a wide and thoughtful perusal.—*Mich. Teacher.*

WISCONSIN.—A. P. Waterman, of Beloit, has founded a scholarship in Beloit College bearing his name, which offers tuition for a year to the graduate of any high school in Wisconsin or Illinois, who passes the best examination on admission to college.

The bad boys in Beloit College are in trouble. Ever since the last Junior exhibition the college faculty have been searching for evidence against the students concerned in issuing a scandalous mock programme. Several of the Sophomore class have been convicted. One has been expelled, and two others are likely to be.

INDIANA.—Indiana has a larger public school fund by \$2,000,000, than any other State in the Union. The report of the State Superintendent urges increase of the length of school term, county superintendency, and compulsory education.

Indianapolis has a public-school library of twelve thousand volumes. Indiana, as well as Illinois, is urging its legislature to provide an efficient County Superintendency of schools. It is bound to come in time. Among the resolutions adopted by the State Teachers' Association are the following:

"The State Normal School at Terre Haute, richly deserves and should heartily receive the commendation of all true teachers.

"We have watched, with great interest, the operation of the new school law requiring the elements of the natural sciences to be taught in the public schools of the neighboring State of Illinois, and are gratified to learn that it is now working successfully, and that, after a fair trial, it has received the hearty and unqualified indorsement of the State Superintendent and the State Teachers' Association in convention assembled, and as other States of the North-west are moving in the same direction, we heartily commend this new school law to the attention of the educational men of Indiana, and venture to express the hope that this State will soon place upon its statute book a similar law.

"Next to the educational journal of our own State, we recommend the support of educational journals of other States, feeling that educational thought is not limited by state lines, but is national and cosmopolitan."

We take the above items from the *Indiana School Journal*.

KANSAS.—The Hon H. D. McCarty, State Superintendent, urged, in a paper read before the State Teachers' Association, "State uniformity of text-books." After discussion thereon, a motion to adopt that part of the paper as the opinion of the Association was lost. "Prof. Palmer thought the adoption of a uniform series of books for the State would create too great a monopoly, and give too much opportunity for rascality. Let

the local districts manage this matter. District uniformity is all that is desired; and the law now demands this."

The *Kansas Journal* says:—"We heartily disagree with the Hon. Superintendent, in regard to a State uniformity of text-books. The plan is thoroughly impracticable, and is as undesirable as it is impracticable." To all of which the SCHOOLMASTER wishes to say, Amen! It is a surprise to know that such a recommendation comes from the State Superintendent of Kansas.

ILLINOIS.—The Ninth Biennial Report of the Superintendent of Public Instruction has been placed in the hands of the people. It is no undue self-assurance that permits the citizens of Illinois, to say that the reports of the Hon. Newton Bateman are among the most valuable of all educational papers published in the United States. The report before us is not inferior to its predecessors. As a hand-book for the superintendents and other school officers of Illinois, it is indispensable.

We find that there are 11,396 public schools in the State; that the total number of scholars attending is 662,049; number of teachers, 20,924; value of school property, \$19,876,708.

It has cost to school each pupil a year, basing the calculation:

Upon the school census,.....	\$ 6 94
Upon the number enrolled,.....	9 25
Upon average daily attendance,.....	18.58

Six State Certificates have been given during the year 1872; five to men, one to a woman. Very many valuable statistics are in the volume, that will give to our legislators more light on the workings of our free-school system.

Mr. Bateman analyses the provisions of the new school law; the new sections are put so plainly that there can be no excuse among school officers for not fulfilling the requirements. That section relating to the necessary steps for organizing a township high school demands attention. From that part of the report entitled "Strictures and Criticisms" an extract is presented in this SCHOOLMASTER. Mr. Bateman suggests that "the sum of ten thousand dollars per annum would secure the services of four or five picked men for this work (institute work)—men of ability and culture, thoroughly acquainted with systems of public education, and experienced in the supervision, management and instruction of common schools—men of prudence, good sense and sound judgment; able both to instruct and train teachers for the school-rooms of the State, and to address public assemblies with force, dignity and effect. They would give their whole time to the work, so arranging their plan of operations as to bring the teachers and people of the whole State, or so much thereof as should be thought expedient, within the range of their influence and efforts, every year. Every institute conducted by them would be in the interest of sound elementary scholarship, scientific methods and principles, and a true education. These things are essential, and it is not possible to be sure of them in institutes having no intelligent supervision, and working on no comprehensive plan, and toward no definite end. Lack of such responsible control and assured ability, of instruction and management, has been the main element of weakness and inefficiency, and the chief cause of occasional failure, in our present scheme of institute operations. It could hardly be otherwise. Without funds; without recognized leaders; without definite plans, or the time to mature and execute them; with no comprehensive system of

co-operation among the counties; with no countenance in the laws, and, in many instances, none from the people, but disfavor instead; with the chief school officer of the county oftentimes unable to take the lead, and not seldom unwilling to do so—the teachers have done the best they could, and the marvel is that they have done so much and so well.

“By the proposed plan, nearly all of those obstacles will be removed. Acting by the authority of the State, and not dependent upon the teachers or local communities for their compensation, these men would enter upon their work under the most favorable conditions. Selected for their skill and ability alone, and clothed with discretion to organize the work upon the scale of the whole State, with sole reference to the needs of the respective counties and to the accomplishment of the best results, they would soon be able to devise and put in operation a comprehensive and well matured plan of common-school effort, and to prosecute the same with telling effect.”

In that part of the report which refers to educational rights, “compulsory” legislation seems to be urged. We are, as yet, a doubter with regard not to the right but to the expediency of this movement. Although the discussion is somewhat old, yet the merits are not exhausted, as is evinced by the able paper in the report before us. We have something to say of “compulsory schooling” hereafter, but hope that our present legislature will leave the matter untouched.

To that part of the report on pages 228 and 229, relating to the County Superintendency we say Amen! Amen! The *great need* of Illinois free schools to-day is an efficient superintendency,—a need paramount to all others.

The recommendations of our worthy superintendent at the close of the volume are all deserving of immediate attention by the legislature.

PEORIA.—The number of pupils enrolled for the month of January was 2,397, being greater than on any previous month. There are, also, about 70 pupils in regular attendance at the evening school. The Board of School Inspectors, ably seconded by Superintendent Dow, take a lively interest in school affairs. They have enlarged the jurisdiction of the principals, making them in reality principals, what they have heretofore been only in name. Examinations for promotion are made by the principals in all grades from the second to the sixth, the superintendent examining the rest. Teachers in the grammar grades are required to keep a record of monthly examinations which count half on promotion. An oral lesson must be given daily in all grades except the first. The board are now discussing the expediency of introducing the study of the German language into the public schools. The report of the committee to whom the subject was referred, will appear in full in the forthcoming report of the superintendent. We pray to be delivered from too many *special* teachers, and trust the Board will act with due deliberation in the decision of this question.

McLean County.—Superintendent Hull has just held the last of his series of institutes for the winter. His plan is, instead of one general County institute, to hold several local institutes in different towns of the county. The places selected this year were Heyworth, Chenoa and Danvers. We had the pleasure of being at the last two; and we can truly say that we have seldom seen more intelligent or earnest teachers than we met on these occasions. The attendance at all Supt. Hull's institutes has been considerably greater this year than last; this is contrary to the general experience of the

State, for in most instances, it would seem that the change in our school law has had the effect to keep teachers away from these meetings. The citizens, too, have showed great interest, not only by their presence at the evening lectures, but by filling the rooms to overflowing at the ordinary daily sessions. We think friend Hull may congratulate himself on this favorable state of affairs.

Champaign County.—T. R. Leal, County Superintendent, sends the following for the benefit of teachers on the prairie:—"Corn stalks make excellent black-board pointers. If you have none in the school-room send a boy out for three or four of the best he can find, and it will save time and money. Corn stalks and husks make first-rate kindlings. Prepare them when dry by cutting them in short pieces, and storing them in a dry place."

Jackson County.—*Real Experience Again.*—Last year, in the school at this place, they patronized many publishers. There were two or three series of arithmetics, and as many each of readers and spellers.

Before the commencement of school this fall, I called the attention of the school board to the clause of the law, requiring them to adopt a series of books for use the next four years, and to enforce uniformity of text books. They wanted to make the change (as change they must; some of the books at least) gradually; part this year and part next. I insisted on uniformity at once, and they finally authorized me to require the children to procure the books they (the board) had adopted. Nearly all of the parents complied at once and cheerfully. Some complained at having to buy new books every year; a few refused to buy the books. Nearly all of these took their children from school. I thus lost five or six scholars. One man continued to send his children (two) to school, and absolutely refused to buy the books required, which were First Readers. He sent word that he did not want his "young ones" to read till they knew how to spell. I saw him and explained the matter, giving reasons, etc., and he agreed that my reasons were good, but doggedly said "I won't buy the books."

By instruction from the school board, I gave notice that after such a time, no one could recite, unless he had the books required. At the time stated, I refused to hear recitations from these two children. Their father *then* went to the board and told a pitiful story about his poverty, saying that he did not expect to stay in the district very long. One of the directors then requested me to "do the best I could," and to "hear their recitations if possible."

Computing the time that each scholar, in each class was entitled to, I found that these *two* children were entitled to *five* minutes of time in a day. I accordingly gave them that time. They reported to their father that I merely called them up and sent them back again, and he sent me an insulting message. I replied only by *silence*. He then took the children from school; kept them out a week or two, then bought the books required and sent them back. Patience and perseverance conquered even *this* stubborn case.

I commenced an oral language class. Some objected to having their children enter this class, because we used no text-book. A little extra talking, in the way of missionary work, soon reconciled them to this also. (The ground-work of the lessons was taken from the "Language Lessons" in the SCHOOLMASTER.)

Many of the teachers in this part of the state are laboring under great disadvantages,

simply from a lack of firmness. The directors don't *want* to adopt a uniform series of books because some will have to buy *new* books; and the teachers are weak enough to allow themselves to be imposed on. One school that I visited lately had *eleven* classes in arithmetic. I have not *twice* that number of classes in all branches, and I have too many.

OSSEO.

Makanda, Ills., Dec. 19, 1872.

Marion County.—The following petition to the legislature is a copy of one sent up from Marion county. It is evident that notwithstanding the sentiments of Senator Casey of Jefferson county, there are some counties in Egypt that are awake on this subject. From the letter enclosing this we learn that the people generally are willing to sign it.

GENTLEMEN:—We, the undersigned, teachers of public schools, of the county and State above named, beg leave to present to your Honorable body the following facts and petition. A careful examination into the history of the public-school systems of sister states shows that, the more efficient has been their supervision, the more beneficial have been the schools; and where there has been little or no supervision, the schools have been of very little value. We can cite counties in our own State in which the standard of education has been raised more than one hundred per cent. by the labors of efficient County Superintendents during the last four years. We are also aware that, in many counties, the office has been little more than a sinecure for some supposed object of public charity; and that teachers have been compelled to undergo examinations before men whom they knew to be far inferior to them in every way, and whose ignorance of the matters they were elected to supervise, was only equaled by their indolence, and lack of attention to duty. In view of the foregoing facts, we respectfully petition your Honorable body, that the School Law be so amended: 1st. That no man shall be eligible as a candidate for the office of County Superintendent until he shall have passed an examination before some competent board of examiners, and shall have proved himself to possess qualifications, at least equal to those required of a first-class teacher. 2d. That the standard for a day's work in visiting schools shall be six hours, actually spent in the school-room. 3d. That the office shall be placed upon the same footing of independence from control, as are other county offices. 4th. That the salary for the office shall be sufficient to command the services of men of first class talent; and your petitioners as in duty bound will ever pray, &c.

We are indebted to Mr. L. S. Kilbourn, for the following items:

Kinmundy.—This place employs five teachers, and although one is called Principal, he is obliged to teach *all* the time, and therefore can have but little influence upon the other schools. On this day I found all but the Higher and Primary rooms frozen out, the teachers having dismissed the pupils; themselves remaining and striving in vain to make good fires from very poor coal. The teachers gave evidence of their own warmth in the cause of education, however, by four of them giving me their names for the SCHOOLMASTER and one for the Teacher. Though, by the way, I was obliged to insure *one* of them that he would get the worth of his dollar, before he would agree to take the SCHOOLMASTER. Knowing him to be a plain, practical man, I felt no hesitancy in taking the risk, even without premium. If I should *lose* the risk, I will make careful note of it, for I think a man who cannot get the worth of a dollar, out of a year's reading of the SCHOOLMASTER, would be an anomaly in the *genus* pedagogue, and should be known to the world.

Salem.—This is our county town, and has one of the finest school buildings in Southern Illinois, if not one of the finest in the State. I cannot speak as highly of the

schools as of the building, although I do not hold the teachers accountable for their failure in good work. There are six teachers employed in the new building, teaching the *white* children, and one in the *old* building in a colored school. Each teacher is held directly accountable to the directors, and the Principal is expected to teach all the time. Five of the teachers gave evidence of earnestness in the work, by four of them taking the SCHOOLMASTER and one the *Teacher*.

At *Central City* I found two schools, under the care of live teachers, both of whom gave me their names for the SCHOOLMASTER.

At *Centralia*, I only had time to spend a few moments in each of four rooms, but it was long enough to show that there was earnest, thorough work being done; and every where could be seen evidence of the controlling and guiding influence of a master hand. The Superintendent, W. D. Hall, teaches one-half the time, and the other half is spent in the other departments. *Every* teacher takes some educational periodical. Friday, I dropped in upon several country schools, and also spent a couple of hours in the schools at

Sandoval, a little town four miles west of Odin, supporting a school of three departments.

ILLINOIS NORMAL.

For the last two weeks, a very powerful and general religious awakening has prevailed in Normal, both among the citizens and the members of the University. Meetings have been held daily, afternoon and evening, in which all the pastors the churches and the young men's, and young women's, Christian Associations of the University, have joined. The evening meetings at the Congregational Church, the largest church in town, have been crowded nightly. Two evenings each week, these meetings have been conducted by the students. A large number of persons have professed to enter upon a new life. During all this time, the exercises of the school have gone on with their usual, constancy, promptness and thoroughness; and it is believed that the amount and kind of school-work done will not fall below the average; while the general health and spirit of the whole Institution were never better.

NOTES — *Obituary*.—Matthew Fontaine Maury, LL. D., professor of physics at the Virginia Military Institute, died Saturday. He was formerly a lieutenant in the United States navy and superintendent of the National Observatory at Washington, but at the outbreak of the Southern rebellion "went with his state" (Virginia) and became a commodore in the Confederate navy. He was the author of a Treatise on Navigation, which was adopted as a text-book for the navy; Wind and Current Charts, with accompanying Sailing Directions, one of the effects of which was a meeting of delegates of various maritime nations with Lieutenant Maury at Brussels in 1853, resulting in the adoption of a uniform plan of observations at sea; The Physical Geography of the Sea, his principal work; and numerous papers on scientific subjects. The great value of the book last mentioned was recognized not only at home but in Europe, its author receiving two complimentary medals from the King of Prussia, accompanied by a letter from Von

Humboldt, a gold medal for art and science from the Archduke Ferdinand, of Austria, and many other marks of honor. He was born January 14, 1806, and consequently his age was sixty seven years.—*College Courant*.

BOOK TABLE.

No notices are ever inserted in this department, for which a price is paid. The BOOK TABLE of the SCHOOLMASTER is entirely independent of outside influence. Books are discussed under what appears to the reviewer to be their intrinsic merits. The primary object of our book notices is to give to our readers the benefit of the opinion of the SCHOOLMASTER. All books sent to us are thankfully accepted; we are desirous of receiving all new works. The reviews may not always be just, but they certainly will come from the pens of fair dealing and unprejudiced persons, and will be written only for the benefit of others, never for pecuniary reward.

The Science of Elocution; with Exercises and Selections systematically arranged for acquiring the Art of Reading and Speaking; by S. S. HAMILL, A. M. NELSON & PHILLIPS, New York.

This is a handsome volume of 388 pp., intended, as the title indicates, to give a scientific basis for instruction in the art of good reading and speaking. In his preface, the author declares that an experience of nearly twenty years has taught him "that the study of elocution ceases where it really should begin, namely, with the adaptation of of the tones of the voice and of the expression of the countenance to the sentiment uttered." The first part of the book treats of expression; the four chapters dwell respectively on Articulation, Respiration, Voice and Action. We have read this part with some care; and we think the author's system has much merit; his directions are generally very sensible; and his short selections for illustration are well adapted to their purpose, at the same time that most of them are real gems of literature. We can hardly forbear quoting one or two remarks which strike us as especially sensible. On p. 74, he says: "Students of elocution and public speakers frequently render themselves ridiculous, and the study of elocution disgusting, by parading their powers of orotund on all occasions." On p. 87, in speaking of the thin "oral" quality of voice, he says: "It is heard in the utterance of persons in a feeble state of health, and frequently by (of) those who are afflicted with affectation." "Afflicted with affectation" we like. We think his table of elementary sounds is good; but we think it would be much better, if both the vocal and the consonant sounds were arranged in pairs; for instance, the sound of *a* in *mat* is cognate with the sound of *e* in *met*, and the sounds of *b* and *p* are cognate, etc. There is a real advantage in this arrangement which cannot be ignored without serious loss. We are glad to notice that he says nothing about the "five sounds of *a*, the three sounds of *i*, etc." It is quite time to recognize the fact that, in such work as he proposes, it is the sounds themselves that are undergoing investigation, and not the letters of the alphabet. We like his exercises under Elementary Sounds, both those of single sounds and those of difficult combinations of sounds. The second part of the book contains a quite full and excellent selection of pieces for practice; here are "things new and old," arranged to illustrate the different styles of reading; and they are good almost without exception. It seems to us that they are worth the price of the book. So far as we can

judge, the selections generally accord with the standard editions of the authors. We deem this a great excellence; an author should be correctly quoted, if quoted at all. We believe the following, however, is faulty in this respect: "Full many a gem of richest ray serene."—p. 29. The author's style seems to be clear and generally correct. On p. 73, however, he allows himself to write "to entirely supersede"; this is not the only instance of the same faulty construction. On p. 73, *Catiline* is misspelled. There are but few things in the book, however, that do not please us; and we believe its use will tend to good results in a field where they are very desirable, but are not always sought by the wisest methods.

Questions for Written Examinations: an aid to Candidates for Teachers' Certificates, and a Hand-Book for Examiners and Teachers. By JOHN SWETT. IVISON, BLAKEMAN, TAYLOR & Co., New York.

There is little doubt that the study of examination questions is an excellent assistance to persons who are preparing to pass the ordeal of an examination. In this book of 206 pp., we have directions and suggestions concerning written examinations, together with several sets of questions upon the subjects of Arithmetic, English Grammar, Geography, U. S. History, Constitution and Government of United States, Theory and Practice of Teaching, Natural Philosophy, Physiology and Hygiene, Spelling, Algebra, Composition, Penmanship, Word Analysis, Book-Keeping and English Language and Literature. The author, late Superintendent of Public Instruction in California, says in his preface, that these questions "have all been used in the actual examinations of schools and of teachers." A part of the questions are original, and a part have been drawn from sets used in Chicago, St. Louis, Cincinnati, Providence, San Francisco and other cities. The first half of the book contains questions for the examination of candidates for teachers' certificates; the last half is filled with sets for use in Grammar Schools of different grades. So far as we have examined, these questions are quite as good as the average used for similar purposes. We may be permitted to say that those on Geography please us least. We observe that the same questions sometimes recur in the several sets; but, when we remember the sources from which the questions are derived, we suppose this is not strange. We do not much approve those spelling lessons in which the words are given shockingly misspelled, for correction; we believe it is best for the eye to rest on as few wrong forms as may be. According to the established rules of mathematical notation, the exercises on p. 146 do not express what they were evidently intended to express; they ought to be changed, or taken from the book. We are sure that it would be a good thing for every teacher, and for every candidate for teacher's office, to procure the book, and to give it careful study.

A Progressive Grammar of the English Tongue: based on the results of Modern Philology. By Prof. WILLIAM SWINTON, A. M. HARPER BROTHERS, New York.

"The proof of the pudding is in the eating;" and we found out long ago, that it is not safe to judge of the adaptedness of a book to the school-room by any mere examination, even the most careful. We are free to confess, however, that this little book of 207 pp. impresses us as one of the best and most practical school Grammars that we have ever seen. The author endeavors to derive his definitions, rules and directions from the actual study of the English Language, aided by the modern discoveries respecting its history; he has not attempted, as so many have done, to "cut over" a Latin Grammar to make it fit the English language. He omits Orthography and Prosody wholly; this

is wise. He treats his subject in four parts, namely, Etymology historically treated, Practical Syntax, Analysis and Construction, and English Composition. We wish to specify some particular things which we deem worthy of commendation. We like the frequent comparison of the English with other languages, and the attempts to explain historically many peculiarities of our speech. We like the small quantity of paradigms and the putting of a part of them in the appendix. In his treatment of Etymology, he asserts that "words are arranged in classes according to the functions they perform, or the work they do, in sentences." This principle is sensible, and he refers to it frequently. In his explanation of the "Compound relative" *what*, on p. 16, he agrees with Butler, whose method we always approved. His diagram explaining cases, on p. 34, we think valuable. We approve his direction to write the apostrophe and *s* after *all* nouns of the possessive singular, p. 36. His arrangement and naming of tenses, p. 46, is good, although not new. In treating of Syntax, he justifies the idiomatic form, "that you told me *of*;" this is clearly right. By observing his brief and pointed directions in Syntax, pupils will learn to avoid many of the most troublesome errors of speech,—a result not attainable by ordinary parsing and analysis. We will instance a few of the forms which he corrects; *used to often come*,—*the rose smells sweetly*,—the incorrect use of shall and will,—the interchangeable use of the participle and the past tense,—the bad use of prepositions and conjunctions. His remarks here are numerous, sensible and practical. The same may be said of his treatment of Analysis and Synthesis; he teaches how to take sentences apart, and how to put them together, in the same connection. His method of representing analysis by diagrams, on p. 157 and onward, we think is both new and good. We are especially pleased with his treatment of English Composition; it seems to us that a careful attention to his judicious and truly *progressive* exercises must teach young people how to write easily, intelligently and correctly. The specimens of actual work in the school-room, good and bad, indicate that the book is the work of a teacher, and not of a mere book-maker.

We have a few points of adverse criticism to make. "A sentence is a thought expressed in words;" but, unless the pupil is led to the *logical, technical* sense of the word *thought*, we think this definition is good for nothing. In general, we think the book is lacking in terse and exact definitions; as well as in formal rules of Syntax. We should like to see definitions and rules by themselves, on a few pages towards the end of the book. We are at a loss to see why the author prefers *Mood* to *Mode*: we think his use of *gender* for *sex*, on p. 13, a grievous fault, especially in a book on Grammar. No school text-books are more complained of, than Grammars; criticisms upon them, wise and foolish, just and unjust, abound. And we find it easy to believe that the model book has not yet appeared. We do not believe this book is perfect; but we think it worth the careful attention of all teachers who are seeking a book that shall teach pupils "how to speak and to write the English Language correctly."

PUBLISHERS' DEPARTMENT.

The *Novelty Printing Press* is one of the most convenient little articles that can be placed in store, counting-room or school. We have had one in the SCHOOLMASTER office for several months and have already received from its use, twice its cost. See *Schoolmaster Advertiser* for particulars.

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LUCRETIA MOTT.

Chancing to be in Philadelphia, last August, during the meeting of the Pennsylvania State Teachers' Association, I one morning found my way to the Academy of Music, where its sessions were held. Soon after the exercises commenced, sudden and enthusiastic cheering announced the entrance of some general favorite; in response to my look of inquiry, a pretty young Quakeress beside me said, "Lucretia Mott." The exercises were suspended, while, by unanimous vote, Mrs. Mott was invited to take a seat on the platform and participate in the discussion. She refused the proffered seat, however, sitting down in the audience. The topic before the convention was, the co-education of the sexes; soon, some question arose concerning the early history of this movement, and the President appealed to Mrs. Mott, as acknowledged authority on the disputed point. She responded promptly; and, when requested to do so, came forward to the stage, accompanied by her grand-daughter.

I can see Mrs. Mott now, as she stood before us then,—a tall, slender woman, dressed in the soft tints of Quakerdom, the traditional "snowy kerchief" folded across her bosom, and her motherly face looking out from the close-fitting Quaker bonnet. A beautiful picture of old age is that grand face, and the dove-colored bonnet seemed a most fitting setting for the picture; but when, warming up in her talk, she untied her bonnet and laid it on the table beside her, revealing the

soft gray hair, banded so smoothly over the broad forehead, we were fain to confess that nature had given that head a more appropriate coronal than art could bestow.

The prints of Mrs. Mott have made us all familiar with her features ; but no picture can give any conception of the wondrous beauty of her expressive eyes, or the charm of her perfectly modulated, clear, sweet tones. In her voice is no suggestion of that straining, so unpleasant in most public-speaking ladies ; she speaks as easily and unaffectedly as though she were our veritable grandmother, sitting by the kitchen fire, and we, children, clustering round her knee ; yet each syllable was distinctly audible to every one of the thousands crowding that vast auditorium.

In that half-hour's talk, she gave us a better idea of the schools of sixty years ago and of the improvements in methods of teaching since that period, than could be gained by months of research. She was as much at home on this theme, as though her whole life had been spent in teaching. While listening to her, it was hard to realize she had ever left the school-room long enough to attend world conventions of reform, or to thrill thousands, as she pleaded for immediate emancipation, temperance, or woman's rights.

Few lives are as many-sided as Mrs. Mott's. Born in 1793, on the Island of Nantucket, of a race that gave Franklin to America, she early learned the lesson of self-help which poverty teaches. Like most Nantucket men, her father was a sailor ; during his long voyages, her mother took care of the children and attended to a small store, wherein she kept " Boston dry goods," to barter with her neighbors, for fish-oil and candles. In this store, Lucretia was " her right-hand man ;" often, when but ten years old, the child would go to Boston, with her boat-load of their island staples, to be exchanged for goods.

Thus " toiling, rejoicing," but not often " sorrowing," the sturdy little islander I fancy, passed her childhood, developing that bodily and mental vigor, and that keen moral sense which now so greatly distinguish her. Even amid the distraction of candles, fish-oil and dry goods, she found time to study, and made such good progress that, when fourteen years old, she was sent to the Friends' Boarding School. The same energy which enabled her so successfully, literally " to paddle her own canoe " in Nantucket waters, soon placed her at the head of her

class. The next year, one of the teachers was sick, and Lucretia was appointed to fill her place. She filled it so admirably that at the close of the year a permanent position was offered her and she accepted it. There was now no pecuniary need of her teaching, as her father was in successful business in Boston; but he, sensible man, thought it a good thing for girls, as well as boys, to learn how to earn their own living, and so consented to the plan.

Working as she did, with whole-hearted devotion, her success was something marvelous. But now Hymen steps in, to spoil a grand teacher, that he may make a grander wife and mother. At eighteen, Lucretia was married to Mr. James Mott, who is described as one of nature's noblemen, both in appearance and character.—It was a genuine love-match, and almost half a century of wedded happiness attested the genuineness of the foundation on which this union was based. The young couple went to Philadelphia, where her father had preceded them, and Mr. Mott went into business with his father-in-law. All went well till the war of 1812, with its embargo, ruined their trade, and made them bankrupt. Her father sunk under the blow, and died, leaving his wife and five children dependent on their own exertions for support. Now ensued a hard struggle for the two families, one in affliction and affection; when all other means failed, Mrs. Mott resumed her girlhood's vocation.

In her childhood she had "made a note" of the fact that while girls must pay as much for tuition as boys, women receive only half as much salary for teaching as men; now when money was so sorely needed by her, this was "borne in upon her mind" with great power. Her sense of right revolted against this injustice, and she began a crusade against it. This crusade has not yet fully accomplished its mission, but in it many victories have been gained; for these victories we have, in great measure, to thank Lucretia Mott.

At twenty-five, Mrs. Mott felt that inward call to preach, which, in the true Quaker soul, is seldom unheeded; from that day to this, she has been one of the most acceptable preachers of the society. But neither this ministry, nor her labors, abundant in the cause of temperance, peace, anti-slavery or woman's rights, nor yet the cares of a large family, which she cared for well, have lessened her interest in the cause of education. If not always a teacher, she has always been the

teacher's friend, systematically visiting schools, and ever giving to teachers most hearty co-operation and sympathy.

She believes, with her whole heart, that regular employment is as necessary to the development of true womanhood, as it is acknowledged to be to the development of true manhood,—that women should be trained “*to do*,” as well as “*to be*” and “*to suffer*.” Hence, she is ever foremost in encouraging attempts to instruct women in practical business, by which they can earn their own living. It was owing to her influence, and that of her co-laborer, Sarah Heyrick, that the first school of design for women in America was established. Every woman who is honestly striving to earn her own or her children's bread, by doing good, honest day's work, finds in Lucretia Mott a friend. For this reason, we who are bearing the heat and burden of the day love her ; for this reason, looking at her, standing, as she does, crowned with the halo of her life's westering sun, we say from our heart of hearts, “God bless *our* Grandma Mott.”

MARY ALLEN WEST.

DIRECTIONS FOR MAKING AND PACKING SPECIMENS OF NATURAL HISTORY.—III.

MOLLUSKS.

The collection of land shells is a very simple matter, if one knows where to look for them. No other appliances are needed than a pair of delicate forceps for handling small and fragile specimens, a tin pan with a perforated cover, or a large bottle with a perforated cork, a small bottle of alcohol and some pill-boxes or “homeopathic vials.” An insect net is sometimes useful for sweeping wet grass and beating bushes.

The land-loving mollusks affect damp places, as a general rule, and should be sought under stones, old logs or bits of wood, and moist, decaying leaves, in moss, at the roots of grass, in gardens and cellars, and sometimes on the leaves of trees.

Fresh-water shells may be found in the mud and sand of streams and ponds, and upon the leaves and roots of aquatic plants. A tin basin, with the bottom finely perforated, firmly attached to a handle

six or eight feet in length, is a very convenient instrument for collecting them. A small dip-net, a bucket of water for "clams," and a can and bottle of alcohol for the smaller species, are also needed.

A thin layer of mud and shells may be scraped up with the basin from the bottom of the stream or pool, when the dirt should be rinsed out and the shells transferred to the can or bucket.

Some species may be obtained by lifting masses of mud with the net slowly and carefully out of the water, removing the mollusks with the forceps. The large bivalves may be raised from the bottom with the basin or net. A small iron rake is sometimes used for clearing away the mud, and bringing them to view, if the current is swift enough to carry away the turbid water.

For cleaning the shells, we require a knife, a wire hook, a tooth-brush, and a very small syringe. The univalves should be boiled for a few moments and the contents removed with a hook. The shells should then be cleansed with the tooth-brush, or by throwing a strong stream of water into them with the syringe, and wiping them out with a little cotton wound about the end of a splinter of wood. The operculum, or plate closing the mouth of the shell, should always be preserved. Some specimens designed to furnish material for the study of the animals, should be put up entire in glycerine. Bivalves may be boiled until they open, and cleaned with the knife and brush, but will keep their color better if they are prepared without boiling. The valves should be tied together with a string before the hinge-ligament stiffens, otherwise the shell will open as it dries. Very small specimens may be quickly dried without gaping, by spreading them upon sheets of absorbing paper, and exposing them to a current of air. A record of localities and other facts of interest must, of course, be kept.

For transportation, the larger and stronger specimens should be wrapped separately in papers and closely packed in stout wood or paper boxes. Small and fragile ones must be put in pill-boxes with sufficient cotton to keep them from shaking about, while minute specimens may best be enclosed in homeopathic vials and confined by pressing down upon them a little cotton or tissue-paper.

FOSSILS AND MINERALS.

No general directions can well be given which will aid in the

search for fossils, as the facts in the case vary widely in different places. The best localities in each county may be learned from the report of the State Geologist, a copy of which can doubtless be found at every county seat.

The collector of fossils and minerals will need the following tools: One hammer of two pounds weight, with a slightly rounded face and a wedge-shaped back—the edge parallel to the handle—another about one-fourth as large with a flat face, and two steel wedges, one three and the other six inches long. The first is used for breaking stones, &c., the second for trimming specimens and disengaging fossils, the wedges for splitting off masses of rock and for many other purposes. A sack or basket for carrying specimens should also be provided, and some strong paper with which to wrap each piece so as to prevent rubbing and defacement. Particular attention should be paid to the record of localities and formations, where these can be learned. Pack closely and fill the boxes completely, so that their contents cannot shake about.

MISCELLANEOUS COLLECTIONS.

A few words regarding the preparation and shipment of alcoholic specimens may not be amiss. They should be put up without crowding, in bottles, jars or kegs, completely *filled* with alcohol or whiskey. Reptiles, fishes and the like, may each be wrapped in cloth or paper, to prevent abrasion; or the vessel may be filled with alternate layers of specimens and cotton, tow or rags. After standing a little time, more liquor must be added to replace that absorbed. The bottles and jars should each be tightly closed and wrapped in paper, and all packed in stout boxes with cotton or paper to fill the vacant spaces.

Insects may be prepared for shipment by packing them very carefully between layers of cotton in cigar or collar boxes. I have received them in good condition where they have been pinned into boxes lined with cork or the pith of cornstalks.

Dried plants should be placed between sheets of paper and tied in flat bundles, stiffened with two or three sheets of paste-board upon each side.

In conclusion, specimens of every kind should be prepared and handled with the most delicate and conscientious care. A very little

indifference or neglect may render fruitless the labor of days and weeks. The safe rule is to work with constant reference to the old maxim, that "whatever is worth doing at all is worth doing well."*

S. A. FORBES.

*The foregoing articles have been prepared with especial reference to those who design preparing objects of natural history for the State museum at Normal. Extra copies of those numbers of the *SCHOOLMASTER* in which they have appeared, may be obtained from the writer.

MODERN LANGUAGES.*

LADIES AND GENTLEMEN :—I do not know that it has yet crystallized into a proverb, that an apology is a prelude to a failure, but some thing of that sort has undoubtedly passed through the minds of most persons. My apology is that it is now many years since I have attempted to handle any subject similar to the one now in hand, so that you can but expect the consequent awkwardness. However, I think that the gentleman who invited me to appear before you ought to share in the responsibility of the indiscretion of my doing so, inasmuch as he was aware of the fact upon which my apology is based.

Some one has said that a man is as many times a man as he has mastered the language and the literature of a foreign nation. In these times I presume we are in gallantry bound to say that a lady is equally as many times a man as she has accomplished the same feat.

Be this as it may, there is undoubtedly a grain of truth in the assertion, and it probably comes as near being wholly true as any of us have come to a perfect knowledge of the language and the literature of any foreign nation.

But this does not militate against the study of other languages—especially of modern languages; and for the very good reason that the study of other languages is indispensable to a full and appreciative knowledge of our own. The greatest of living linguists has said that he who knows only one language knows none.

But I am to say a few words in reference to the study of modern languages in our schools; and from what has already been said, ladies

* An abridgment of a paper read at the State Teachers' Association, at Springfield, Dec. 26, 1872, by C. P. Merriman, of the *Bloomington Daily Leader*, on the Study of Modern Languages in our Schools.

and gentlemen, it is hardly necessary to say that I am in favor of such a course.

In the first place, I would say, that so far as the study of languages is concerned, I would, at one blow, reverse the whole course of study now pursued in our popular educational institutions; that is, I would always commence with the modern languages, and make that commencement early. A few reasons, on the present occasion, must suffice.

All educators admit that a leading object, in their courses of study, is mental training,—the cultivation, the development and the strengthening of the organs through which the mind acts, and the formation of the mental habits of the pupils. Well, we all know that in the study of the ancient languages, we have resort to grammars and lexicons, to learn the forms of the words expressive of their relations to each other, and to learn their meaning. We then bring our verbal machinery to bear upon some author whose writings are so unfortunate as to fall into our hands, and with grammars and lexicons as fulera, we labor to raise the meaning of the author out of the text. Frequently it is doubtful which is the more to be pitied, the author or the student—the victim or the perpetrator of the execrations and absurdities. I grant that the process may cultivate perception, comprehension, apprehension, and it would strengthen the judgment, were it not, in most cases, at so early a period in mental development, that it tends rather to confuse all exercise of the judgment. But it is, nevertheless, an exercise, as it usually keeps the student in a state of perspiration between comprehension of the text and apprehension of his teacher.

But, ladies and gentlemen, you see that the eye is, almost exclusively, cultivated, in this process. The form of the words, which is the guide to their meaning in the sentence, is taken in by the eye alone. The ear and the tongue play but a very insignificant part, as these dead languages are not now spoken at all.

In the study of the modern languages, intelligently pursued, all this is changed. The primary object is the training of the tongue to the utterance of the elementary sounds—the phonetics—of the particular language in hand, and the training of the ear to the instantaneous recognition of those sounds, and to the discrimination between the true and the false in the qualities of the sounds.

Thus you see, ladies and gentlemen, the ear, the tongue, and the eye are all put into simultaneous development ; but the eye plays only an accompaniment, in the mental harmony, instead of playing a solo. This, of course, presupposes the ability, on the part of the teacher, to speak as well as to write, the language under consideration ; for which supposition, I offer no apology.

In thus pursuing the study of a modern language, not only are more physical and mental faculties brought into play, but they are greatly more quickened, rendered delicate, acute, and certain, in their movements, and more strengthened than in the study of the ancient languages. Let us look at this for a moment.

In a spoken language, the ear must be so cultivated, by continuous experiences, that it can instantly recognize the true sounds, peculiar to the language, and detect the false. So must the tongue be trained by constant practice till it can almost spontaneously give utterance to all those sounds.—When addressed in a foreign language, quick as a flash of thought, the student must take in the elements of the words, the simple, compound, primitive, derived, common, modified, or figurative, form and meaning of those words; in short, a full and correct analysis of the words in the sentence, and the force and meaning of the sentence as a whole.

Instantly must be put in array the appropriate words in a reply. This implies a complete synthesis of the sentence, in its elements, and in its entirety. The effect, the propriety, and the force of prefixes, of suffixes, and of syntactical modifications must be instantaneously grasped and vividly seen in the mind's eye, and then the tongue must be watched that it shall correctly render every element, every accent, every inflection.

Immediately, he must observe, from the tenor of the reply, whether or not his own shot reached its point, and produced the intended impression. Here we have in full play nearly all the faculties and the emotions of the human constitution, in simultaneous action ; and so rapid are the processes that they develop the delicacy, the certainty, and the efficiency of the mental perceptions and susceptibilities astonishingly.

How little of all this do we see in the study of the ancient languages ! We go plodding from word to word, learning formulas from

the grammar, and probable and possible meanings from the lexicon; and when we have been so fortunate as to extract a result that will stand on all fours, we have achieved a triumph! Yet, the chances are against us, whether or not we have, at last, grasped the meaning of the author. It is patent, to the most superficial investigator, that such must be the facts in the case, in the experience of young students. As far as the phonetics of the ancient languages are concerned, they are most uncertain and most unsatisfactory, because the true utterances of those languages are lost beyond recovery, and modern artificial systems of pronouncing them are arbitrary and ever various.

I admit the advantages of studying the ancient languages, in the way of mental discipline, the cultivation of taste, and the better understanding of the force and the full meaning of our own language. It could scarcely be otherwise. But what I wish to make evident is that the present course of study is preposterous; that the modern languages should be mastered first, and that the faculties of the young student would be much better developed.

Much stress is put upon the advantages and the pleasure, to the true student, of tracing the derivation of our own language from the ancient languages. I would be the last to deny such advantages and such pleasure. But they belong not exclusively to those languages. We are also indebted largely to the Old Saxon, to the French, and to the German, and more or less to many other languages; and it cultivates the scope of the mind to trace these relations through a modern language to the ancient ones, later in our studies, as well as it does to trace them down into our own.

But in reference to the cultivation of our faculties, in the study of these two different classes of languages, let us illustrate. Which would you call the accomplished sportsman? The one who had the control and the command of his faculties, so perfected by practice, that he could with certainty, precision, and apparent ease, bring down his game on the wing or on the run, or him who could work his way laboriously into the vicinity of his game at rest, and who could simply hit an inanimate target, like the dead languages?

Or which would you call the master musician? The one who could thrum out a piece of music set before him, after slow and repeated

trials at it, or him who could perform it at sight, with all its force and delicacies, and then forthwith compose another piece of equal merit?

Very similar are the results in studying the modern languages, when rightly pursued, in comparison with those in studying the ancient ones.

But as to the time of commencing the study of these languages, I would not, on any account, defer it beyond the High School Department. At an earlier grade would be better. Of the thousands of French ladies and gentlemen whom I have heard speak English, not one of them who had not commenced the acquisition of it in early life could speak it correctly; and not one of our American graduates who had laid in his stock of knowledge of a modern language, in his collegiate course, after having spent years in studying the ancient languages, have I ever heard speak that language respectably, nor even tolerably; nor could such a one write it at all.

Such must, from the very constitution of things, be the results. No person ever plays the piano or the organ, to perfection, who does not commence early in life. The delicacy of touch, the precision and the rapidity of execution must be the result of long practice, commenced while the hands and arms are pliant, and grow with their growth, and improve as they develop.

So with the ear and the tongue, while yet pliant and susceptible they must be trained to the utterance and the recognition of the elementary sounds, the tones, and the accents of a foreign language. Like the hand and the eye of the artist, the artisan, the musician, the mechanic, and the operative in manufactories, these delicate organs must be educated by thousands and thousands of repetitions, until the acquired shall become normal.

Young students can be introduced to literature adapted to their capacity and taste, in easy style, and on interesting subjects, that shall lead them almost unconsciously to clothe their thoughts and impressions in the foreign dress, and render familiar to them the thousands of little turns of idiomatic expression peculiar to each language; and without an acquaintance with these, we can never be at home in any language.

Here we have a conclusive argument in favor of introducing first the study of the modern languages. *We have no youthful literature in the ancient languages.* We have the fragmentary utterances of

the orator, the statesman, the jurist, the philosopher, the historian, and the poet ; but of youthful literature, we have absolutely none. In fact, the literature of childhood and of early youth, is almost exclusively a creation of these latter days—within the scope of our own personal memories.

Far be it from me to speak lightly of the glorious fragments of ancient literature. To them modern times owe a debt of gratitude for the revival of learning, after a long and dreary period of darkness and of ignorance, for which we can never be sufficiently grateful ; and happy is it for those young ladies and gentlemen whose circumstances, tastes, and previous training have prepared them to enter understandingly and wisely upon the treasures locked up in those languages to a full enjoyment of which no translations can ever introduce them.

But the literature which has come to us in those languages is the letter which killeth, to young minds, and they cannot take in the spirit of it, which maketh alive. Not so with modern languages. They are the media of the thoughts, of the sentiments, and of the knowledge of the present time, alive with the animating interests and all-embracing attainments and reachings-forth of their actual lives. Of a large portion of all this, the ancients knew little or nothing. Our modes of thought, our many sciences and knowledges, and our vast commercial enterprises and national intercourses, were to them almost as sealed books. Hence they could have no terms of expression to communicate ideas of which they had no conception.

With the modern languages, this is all changed. Young minds find in them words and terms of expression corresponding to their own, and adapted to our present state of mental culture, and our state of civilization. Instead of a dry and ungrateful task in laboring to work out the unfamiliar ideas buried in the antiquated language of the dead past, it is a discovery full of delightful surprise to the young, that they can clothe their ideas, like their persons, in foreign forms and styles ; that their every-day, and their momentary, thoughts can be made to fit as neatly and as perfectly into the forms of another language as they do into those of their own. Thus this constant growth of intelligence and of enlarged conceptions becomes an ever increasing source of pleasure.

Of all the modern languages, the German and the French offer

the greatest inducements to make their acquaintance. Four-fifths of the vast knowledge of the day is originally clothed in these two languages. In profound research after the well-springs of all human knowledge, the Germans surpass all other nations ; and their language is, consequently, the most all-comprehensive.

In acuteness, precision, and elegance, the French is the language of the polished scholar, of the accomplished gentleman and of the man of the world.

It matters little upon the study of which of these two the scholar shall first enter. Each of them opens to treasures of thought vast as the comprehension of the human mind, and rich as its fertile imagination. When young minds shall have bathed for a few years, in the fountains of intellectual light opened up by the geniuses that have clothed their thoughts in these languages, they may then enter upon the study of the classical and of the Oriental languages, with greatly improved chances of gathering rich gems in reward of their labors.

No person can acquire complete command of any highly cultivated language short of years of practice under favorable circumstances. When a foreigner told me, many years since, that I might hope to acquire, with habits of industry, a very respectable knowledge of the German language, in seven years, I was in much doubt which regarded the other as the greater fool. I have since made up my mind as to which was the intelligent personage.

The reason of its requiring such length of time to completely master a copious modern language, like the German, is obvious, from the fact that the language varies in its words, and in the meaning of the same words, ever as the subject varies; so that a complete knowledge of the language implies an acquaintance with all its varieties of literature.

What should we think of the intelligence of an American teacher who should set the boys and the girls of foreigners, who were to study the English language, upon the writings of Milton, Burke, Locke, or Edwards, at the start? Or of a foreign teacher, who should put American girls and boys to studying Cousin, Kant, or Dante, at the commencement? Yet this is just what we do in putting our girls and boys to reading Cicero, Sallust, Virgil, Xenophon and Homer, in their early studies : and this is what we are obliged to do, if they commence

their study of language with the ancient ones, simply, as I have before said, because those languages have no youthful literature. When the course of study was established which is still followed in most of our colleges and universities, nearly the whole of the knowledge and of the literature which was accessible to the nations of western Europe, was locked up in the Greek and Latin languages. The circumstances are now so very different, that these institutions should adapt themselves to these changed circumstances instead of ignoring them. Not only have the treasures formerly locked up in these two languages been poured out into the modern languages, worthy depositories of the sacred trust, but we have now a dozen or more modern classical literatures; besides, we have vast resources of learning and of science, modern acquisitions, of which the Greeks and the Romans knew nothing, and which their languages have no terms to express.

But now we have all these vast acquisitions of the human mind, or the sum and substance of them, made accessible through the German, the French, the English, and the Italian language. In these four languages we have intellectual treasures adequate to the demands of the most active minds for a long life.

I would not, however, discard nor disparage the study of the ancient languages. The acquisition of them is worthy of the highest ambition; but in their proper order. I would rather reverse the prevalent course of study, and for many reasons commence with the modern languages. Their correct pronunciation is attainable. They have youthful literature, full of living thoughts, and of images consonant with the age in which we live, and they can be made the medium of communication between scholar and scholar, and between teacher and scholar; thus leading young minds almost unconsciously to the acquisition of the language.

I would have the study of these languages commenced early, as thus, and thus only, are a correct pronunciation and a perfect knowledge of them ever acquired; and because, if their recitations are intelligently conducted, pupils can get a very good idea of a foreign language, and thereby a better knowledge of their own language than is otherwise possible, in less time than is now devoted to the study of English grammar alone.

But, ladies and gentleman, I must close; and in doing so, let me

express the hope, yes, the firm conviction, that we shall, in this country, have a revised and complete system of education that shall surpass the systems of all other nations as greatly as our opportunities surpass theirs. The best of the noble old institutions of Europe still retain much of the obsolete and of the objectionable of the middle ages and of monarchical influences. Their currents of literature run deep and they are rich with the precious inheritances of the ages ; but they are too exclusive, too narrow, and too traditional.

Here we have a vast extent of new country, the best form of government extant, and the most active, intellectual people on earth. Let us try to come up to some just conception of our immense advantages and of our infinite responsibilities. It is the mission of this people greatly to give form and consistency to the political institutions, and to the moral stamina of the coming nations. Let us rise to the contemplation of the dignity and the blessedness of our destiny.

As to the particular subject of popular education, the basis of all else that is valuable in our social and civil institutions, let us cease to wrangle about the exclusively superior importance of the modern languages and the ancient languages ; the classical course and the scientific course ; the disciplinary and the practical course. These are all good, and all equally good ; but each in its own order.

Let the modern languages be taught in our schools and our academies ; let these be perfected, and the ancient languages studied in our colleges and universities. But let us not rest in an acquaintance with these languages, any nor all of them, as education. They are only the indispensable means of arriving at higher and more important attainments. Though we may babble in all the babbling tongues of this babbling earth, they are but evanescent vanities, unless we have the good sense to use them wisely, and the knowledge to communicate by their use.

They are only the keys to unlock our store-houses of intellectual treasures ; and if those store-houses contain only hay, wood, and stubble, though the key may do well its part, its possession profiteth nothing.

Finally, we must have national universities. Some of us may never see them, save by the eye of faith. But they will come. They are even now a necessity. We must have one in the East, one in the

Mississippi Valley, and one in the West. Let these be liberal in all their appointments and appliances for the highest attainments in philology, science and literature, beyond anything of the kind known to human experiences. Mean time, let us do well our own work among the elements. Perhaps some plants, cared for by us, may attain those heights of mortal greatness, and bear precious seeds of national salvation.

PRESIDENT DANIEL C. GILMAN.

Daniel C. Gilman, late professor in the Sheffield scientific school of Yale College, was installed president of the University of California on Thursday the 9th instant.

President Gilman is a native of Norwich, Connecticut, and is now 41 years of age. He was graduated at Yale in 1852, continued his studies at the college during the next year, and was subsequently for some time attached in the official capacity to the American legation in St. Petersburg. He continued his studies at the University of Berlin, and in 1855 was secretary of the American commission to the Paris exposition. From 1856 to 1865, he was librarian of Yale College. Since 1863 he has held the chair of professor of physical geography and history in the Sheffield scientific school, with the success of which he has been intimately connected since its establishment. For several years he served as superintendent of the public schools of New Haven, and subsequently as State superintendent of instruction in Connecticut. He has frequently appeared before the public as a lecturer, chiefly on scientific and educational topics, and has contributed articles to the *North American Review*, *The New Englander* and the *Journal of Science*. He enters upon his new and promising field of effort in the prime of life, bringing to it a mind fertile, courageous, prompt, liberal, industrious and hopeful, and distinguished especially for superior organizing and executive talent, disciplined by a various experience both of business and scholarship, through all of which he has acquitted himself honorably. The estimation in which he was held at the East is shown by the prominence given to his name in connection with the presidency of Yale College after the resignation of President Woolsey was announced and the people of California have valid reasons for their anticipation that he will do excellent service in the place to which they have called him.—*Exchange*.

THE PARTICIPIALS.

Matter and method are often confounded. In striving after the *how* and the *why*, the *what* is too frequently measurably forgotten. What we teach, so generally determines our method of teaching it, that the matter to be taught should receive our most careful attention. For these reasons, we shall consider only the matter-side of our subject.

The things of which we think are objects, and the powers, the attributes and the relations of objects. Language is the embodiment of thought, and has its objective side in the real or imaginary world, and its subjective side within us, that is, words represent things not as they are in themselves but as we conceive them. Since ideas are called into being by real or imaginary objects, if we go from the objects to the idea and thence to the word, language becomes instinct with life. The class of words which express the powers of objects, is called the verb. This term is of classic origin, and means that which asserts, in contradistinction to that which merely designates.

As the powers of objects may be conceived of in two ways, viz: 1. as arising from or inhering in objects, or 2, as being themselves the objects of thought, the verb is divisible into two parts, to-wit: I. The finite verb, and, II. The participials.

The finite verb has three distinguishing characteristics, viz: 1. It expresses time. 2. It shows whether what it expresses is regarded as actual, as potential, as conditional or as willed. 3. It has a change of form determined by the number and person of its subject. The participials, on the other hand, are without any of these characteristics. They are achronic. They have no *tense*. As the terms present and perfect are applied to infinitives and participles, this statement may seem incorrect. Our term *tense* expresses not a simple but a complex idea. It denotes both condition and time, showing whether the power expressed is exerted in present, past or future time, and also whether it is indefinite, progressive or perfect. The participials express condition, not time, and hence are without true *tense*, the perfect expressing what is completed.

The question is sometimes raised whether the infinitive is a mode. We think it is not, and for this simple reason. The act or state expressed by a participial is actual, which is the normal condition of what is expressed by the verb. We prefer the new philology which embraces the infinitive, the participle and the gerund under the general name of participial. Hence our classification.

To determine more fully the nature of our English participials, it will

be necessary to glance at their history. In Anglo-Saxon, there were four distinct forms, viz :

1. The infinitive ending in *an* or *ian* with *to* very rarely preposed.
2. The gerund ending in *anne*, sometimes in *ende*, with *to* always preposed.
3. The participle ending in *ende*.
4. A verbal noun ending in *ung* or *ing*.

In the process of growth in changing into modern English, the infinitive ending has been dropped (the infinitive being now distinguished by a preposed *to*). while *anne*, *ende* and *ung* are sometimes dropped or are changed into *ing*. We see, therefore, that what is now called the participle in *ing* may be the gerund, the verbal noun or the present active participle.

This brief statement in regard to the history of the participials may suffice, while their uses shall claim our further attention. They are used in three general ways, viz : I. They are associated with auxiliary verbs to form the modes and tenses. II. They are construed as adjectives, nouns or adverbs. III. They are used to abridge clauses.

I. There is a class of teachers who measurably discard the machinery of grammar, and consequently do not recognize relational and formative words. Such words are a real growth, and constitute part of our English idiom. For instance, the primitive signification of *have* is possession. Thus, *he has his lessons prepared* expresses the possession of an object in the condition expressed by the participle *prepared*, while *he has prepared his lessons* expresses the completed act of putting the lessons into that condition. The latter form is accepted as the perfect tense, *have* losing its notional force, and becoming a purely formative word. In a similar way, the other auxiliaries have lost their notional force and have become formative words. Since, even in the most highly inflected languages, not all the relations of thought are expressed by inflection, we may safely accept the doctrine that some grammatical notions are expressed by formative words.

In Anglo-Saxon, the participials are used to form the modes and tenses, viz : (a.) The infinitive is used after *may*, *can*, *must*, *shall*, *will* and *do*. (b.) The participials are used after *have* and *be*. (c.) The gerund in *anne* with *to* preposed is associated with the verb *to be* expressing obligation to form a future potential, as, *I am to go*.

In this connection, allow me to remark that in all these cases the participial denotes a definitive object, and, were not analogy and general uses against it, they might be disposed of as limiting the auxiliary.

II We shall next attempt to discriminate with regard to the use of participials as adjectives, as nouns, or as adverbs.

a. Both the active and the passive participials become adjectives, and thus lose their verbal character. When we say a *learned man*, a *blazing fire*, the mind reverts to some quality in the objects denoted by *man* and *fire*, and not to any act performed by them. In such cases the *ed* of the passive participle frequently becomes a distinct syllable.

b. In such expressions as a *laboring day*, a *church-going bell*, his *all-obeying breath*, *laboring*, *church-going* and *all-obeying* are verbal nouns used adjectively, just as in such expressions as a *ten-foot pole*, a *fiddle-string*, the nouns *foot* and *fiddle* describe the objects denoted by *pole* and *string*. A *singing bird* is a bird which sings, but a *laboring day* is not a day which labors. *Laboring*, *church-going* and *all-obeying* show the design of the objects denoted by the nouns which they qualify. Our language is full of examples, such as a *fishing-pole*, a *swimming-school*, a *skating-rink*, etc.

c. There is a prevalent error that all words ending in *ing* are participles. From the 12th to the 16th century the participles ended in *and*. It gradually lost this ending and assumed *ing*, which has always been characteristic of the verbal noun. Similarity of form has led to a confounding of dissimilar things. A verbal noun expresses the doing of the act, or the existing of the state, expressed by its theme; as, *stealing is base*; *being is not becoming*; *digging potatoes is hard work*; *stealing*, *being*, *digging*, and *becoming*, are not present active participles but verbal nouns. Many of our verbs become nouns, and do not end in *ing*. This occurs when the result rather than the act is looked at; as, *the ebb(ing) and flow(ing) of the tide*; *the rise and fall of the Roman Empire*.

d. The participial with *to* proposed is generally the gerund, very rarely the infinitive. As the gerund was commonly used as a noun having the particle *to* before it, it seems to me well to regard this form still as such. We find it thus used as subject and complement of a verb or preposition; as, *to love makes not to be loved again*. When the gerund as subject has a subject of its own, that subject must be preceded by the preposition *for*; as, *for him to go is impossible*. One important feature of both the verbal noun and the gerund is that they take complements after them just as the verb does; as, *writing letters is pleasant employment*; *to love my mother is my duty and delight*.

e. The participials are also used adverbially. They are thus used in three general ways, viz:

1. The verbal noun may be used to express a co-existing act or state; as, *he came riding backwards*; *her voice came ringing on the air*; *she fell fainting at his feet*. In such cases the gerund limits the verb and express-

as what is very much akin to manner. In this connection may be noticed a form somewhat antiquated yet found in our current literature, viz ; *I went a fishing ; while the ark was a preparing ; I am a going to go*, etc. The *a* is not the indefinite article but a preposition, and should be disposed of accordingly.

2. The infinitive (gerund with *to*) is used to limit another verb by expressing the extent, purpose or consequence of the act expressed by the limited verb. Thus in the sentence, *I was forced to beg my bread, to beg* shows the extent of the forcing and limits it in that respect. In, *he went to see his friend, to see* shows the purpose of the going; and in, *read so as to be heard, to be heard* shows the consequence of the reading.

3. The infinitive (gerund with *to*) is used to limit adjectives expressing what is called the definitive object, and showing in what respect the quantity designated by the adjective exists. Thus, if I say, *I am ready, ready* expresses a susceptibility unlimited; but if I say *I am ready to go, to go* shows in what respect I am *ready* and hence limits *ready*.

III. In the third place, the participials have constructions peculiar to themselves. The participials have four complex constructions, viz :

1. The infinitive or participle may denote the final object and express an act of or on the object denoted by its subject. This construction is commonly called the accusative and infinitive. In Anglo-Saxon, when this final object expressed an act of its subject, the infinitive (without *to*) was used. This is still the case in English. Hence the common rule that after certain verbs the *to* of the infinitive should be omitted, is a misstatement of fact. The *to* has never been in such expressions as *I saw him fall ; I heard him sing ; bid him come ; make him study ; help him carry it*, etc., and hence any analysis which supplies *to* must be erroneous. In modern English, this construction has been both extended and restricted. We use it with the active voice only of certain verbs of cognition, bidding and causing, also with *please*. We use *to* with passives and verbs of teaching, while the infinitive without *to* was used in Anglo-Saxon. The participle is used in the same way ; as, *I heard him singing*.

When the final object denoted an act on the object denoted by its subject, the gerund (with *to*) was used. The gerund seems to be passive in its nature, and hence in such expressions as *bread to eat, a house to let, work to do*, the participial expresses an act on its subject, and the meaning is *bread to be eaten ; a house to be let ; work to be done*. The passive participle is similarly used in a causative sense ; as, *he had a coat made ; he caused a coat to be made*.

It is a mooted question whether this objective noun or pronoun is the complement of the finite verb, or the subject of the participial. The solution involves an answer to two questions, viz; 1. What is a subject? and 2. What is the complement of these verbs? We should never confound the nominative case with the subject; the former is a peculiar form of a noun or pronoun, while the latter is a word used in a certain relation. The subject is a word or words denoting the object of which a verb asserts an act or state, and the participials in this case affirm something of the objects denoted by these objectives. Further, the true object of the finite verb is the act or state expressed by the participial, not the object from which it proceeds. Thus, in *I heard him sing*, it is not the man but the singing which is heard. This final object is expressed by a participial, the subject of which is denoted by a substantive in the objective case. Hence we conclude that this objective is not a complement of the finite verb but a subject of the participial.

2. There is also a case of the participial in *ing* used in a way similar to the above, with the exception that its subject is in the possessive case; as, *I prevented his falling*; *I heard of your son's marrying*. *Falling* and *marrying* are verbal nouns, not present active participles and their use here is somewhat analogous to the Latin gerundive, e. g. *sui purgandi causa*--for the sake of his clearing himself; *ne obliviscere scribendae epistolae*--do not forget the letter to be written. After verbs of preventing, the Latin uses a clause, while we use a verbal noun with a possessive subject. The usual method of disposing of *his* and *son's* as ordinary possessives is objectionable, because they do not limit *falling* and *marrying*, but denote the objects from which these acts proceed, and hence are subjects. It is true there is a kind of limitation expressed but only such as every subject exerts in limiting the act or state expressed by the verb to some particular object. Hence we conclude that the subject of a verbal noun after verbs of preventing or a preposition is in the possessive case.

3. The participle sometimes refers to a noun or pronoun related to some other word; as, *I had no relation living*; in which *relation* denotes the direct object of *had*, and *living* refers to *relation*. This is a very common construction. It takes place whenever a relative clause is abridged; as, *a man (who is) respected by all, should be happy*. The construction is sometimes called the conjunctive participial construction.

4. The absolute construction differs from the one just mentioned in this, the participle relates to a noun or pronoun having no relation to any other word; as, *his mother being dead, he was very miserable*. In English, we regard the subject as in the nominative case; in Anglo-Saxon, the dative was used, hence the expression, *whose gray top shall tremble*, him descending,

is archaic, and as *no* marks the dative rather than accusative, *him descending* is analogous to the Anglo-Saxon dative absolute. In all the foregoing cases, the participials are used to abridge subordinate clauses, viz :

a. Substantive clauses ; as, *I saw him fall—I saw that he fell ; I do not know what to do—I do not know what should be done ; I was not aware of his being a lawyer—I was not aware that he is a lawyer.*

b. Relative clauses ; as, *the Bishop, followed by a long train, rode on a snow-white palfrey—the Bishop [who was] followed &c., ; the sun, smiling away the clouds, played upon the Xenil—the sun [which was] smiling away, &c.*

c. Final clauses ; as, *I came to see—I came [that I might] see ; he was sent to reconnoitre—he was sent [that he might] reconnoitre.*

d. Temporal clauses ; as, *having written a letter, I retired—I retired [after I] had written a letter ; so saying, he descended to the court—he descended to the court, [while he was] saying these things.*

e. Causal clauses ; as, *the weather being cold, the work was delayed—the work was delayed, [because] the weather [was] cold.*

f. Modal clauses ; as, *he was too sick to sing—he was [so] sick [that he could not] sing ; read so as to be heard—read so [that you may] be heard.*

It will be observed that in all these cases the abridgment is effected ;

1. By omitting the connective or substituting a preposition.

2. By omitting the subject or changing it to the possessive or objective form.

3. By omitting the copula or auxiliary, or changing it into a participial.

I would teach my pupils the syntax first, then the analysis of sentences, or I would teach the two together, but I would not base my syntax on supplied words, but upon the common usages of the language.

Thought and language are distinct things, and hence the grammarian, whose province it is to deal with speech as he finds it, should never resort to equivalents or ellipses to surmount any difficulty, but should take all established forms and conform his system to them. The participials are used to give expression to condensed thought, especially for the purpose of preventing tautology. Our English idiom rejects the expanded forms given above and prefers the compacted forms in which participials are used.

For the convenience of any who may wish to use this matter with advanced classes, we append a synopsis of the points discussed.

1. The verb : its nature and divisions.

2. Characteristics which distinguish the finite verb from the participials.
3. The infinitive not a mode.
4. The history of the participials.
5. The uses of the participials, viz :
 - I. To form the modes and tenses of the finite verb.
 1. Infinitive with *may, can, must, shall, will* and *do*.
 2. Participles with *have* and *be*.
 3. The gerund with *be* to form a future potential.
 - II. As other parts of speech.
 1. As adjectives, viz :
 - a. Participle becoming qualifying adjectives.
 - b. Verbal nouns expressing design.
 2. As nouns.
 - a. Verbal nouns ending in *ing*. Drop *ing* when denoting result.
 - b. The gerund, having a subject preceded by *for*.
 - c. Verbal nouns and gerunds with complements.
 3. As adverbs.
 - a. Verbal nouns expressing co-existence. The preposition *a*.
 - b. The gerund expressing extent, purpose, or consequence.
 - c. The gerund denoting the definitive object.
 - III. Participials used to abridge clauses.
 1. Denoting the final or remote object.
 - a. The infinitive or participial denoting an act of its subject.
 - b. The gerund denoting an act on its subject.
 - c. The passive participle denoting act on its subject.
 - d. The objective subject discussed.
 2. Verbal noun with a possessive subject.
 3. The conjunctive participial construction.
 4. The absolute construction.
 - a. Anglo-Saxon dative absolute.
 5. All kinds of clauses abridged. Thought condensed. Language compacted.

T. R. VICKROY.

COLLINSVILLE, ILL., Feb. 27, 1873.

Lippincott's Magazine is one of the best of the popular monthlies. It is valuable to the teacher. Although a four-dollar magazine, we can send it and the SCHOOLMASTER to one address, one year, for four dollars.

EDITORS' DEPARTMENT.

The past year has witnessed an unusual amount of teachers' institute work. There is but one opinion among school men as to the value of institutes, but the methods employed in the conduct of them are various. In Illinois, partly perhaps on account of the new law introducing new branches of study, the tendency is to longer time and fewer branches of study; and the tendency is surely a healthy one. An institute, or drill, covering five or six weeks, during which time the energies of the class are used in definite fixed directions, and not made to cover the whole scheme of common schools, is the most efficient. Teachers complain that little is carried from some of these institutes, because the time has been employed by too many instructors, each of whom has some theory that must be advanced. The complaint is just. Let us have teachers' meetings during the summer, directed by the respective county superintendents, with one or, at the most, two competent instructors. Let the meeting last at least three weeks, and six if convenient.

Adopt a programme of few subjects; let the lessons be assigned and prepared and recited from day to day. The many words that have been written about the nonsense of preparing to teach natural philosophy, zoology, botany and physiology in three weeks, are true, but need explanation. While it is evident that such preparation is impossible, it is true that an earnest young person, after attending three weeks of *starting* work on these branches, has built a foundation with the help of instructors, and is able to go home and "work out his own salvation." The direction—the start in the investigation of a science, is difficult, because of the utter ignorance of the means. One of our counties held such a school for three weeks last summer. The studies were the four mentioned; two instructors were employed: as the enrollment was too large for one class, two were made; four recitations a day were held, one in each study, the instructors each taking a class each hour. In this way all worked all the time; the county superintendent presided; the members paid three dollars—a dollar a week. The instructors were paid forty dollars per week. At the close of the session, a written examination was held, with a favorable showing of the work done. Now, it can not be supposed that the members of these classes were fitted to teach the branches at once, but it is believed that many of them have pursued, since, the investigation there commenced, and that to-day some of them are competent to present something of the subjects to classes in their schools. We believe most heartily in institute work conducted on the "one idea at a time" principle. We will assist county superintendents, to the best of our ability, in organizing such institutes, and in providing means for carrying them on. The editors expect to spend part of the summer vacation in such work.

A correspondent inquires, by what authority some writers begin the abbreviations *Mr. Dr.* etc., with a small letter? Who can tell us?

The following mathematical problems are offered by correspondents:

1. It is required to find formulas by which the three sides of a right-angled triangle may be represented by whole numbers; or by which such

whole numbers can be found? Now, let some of our young friends "brush up" their Algebra, and send us the result.

2. A lady bought a dish and cover for 24 dimes; 1-5 of the cost of the dish, increased by the difference of the cost of the dish and the cover, equals the cost of the cover. What was the cost of each? Only an analytical, *arithmetical* solution will be accepted.

A objects to the solution of the problem in a number of the SCHOOLMASTER, because it was made by Indeterminate Analysis; he says that many teachers find that analysis is an "obscure branch of mathematics. He offers the following solution by alligation :

$\frac{2}{3} \left\{ \begin{array}{l} 11 \\ 3 \end{array} \right\}$ If we link 11 and 3 each with $\frac{1}{3}$, and write the differences as
 $\frac{2}{3} \left\{ \begin{array}{l} 3 \\ 12 \end{array} \right\}$ 1. usual in Alligation, we find that $\frac{2}{3}$ will represent the number of cows and sheep respectively, while $10+2$, or 12, will represent the number of geese. Multiplying each of these numbers by 3 and dividing by 2, we have 1, 1 and 18 as integers representing the respective numbers. Hence $\frac{1}{10}$ of the 100 must be cows, $\frac{1}{10}$, sheep, and $\frac{8}{10}$, geese; the answer will be 5 cows, 5 sheep and 90 geese.

This is doubtless correct; but the trouble with this solution, friend A., is that it gives but *one* answer of several, and furnishes no method by which we can tell how many answers are possible.

EDUCATIONAL INTELLIGENCE.

The following, from the New York Journal, is exactly what the SCHOOLMASTER wishes to say:

We desire to make a specialty of State news, and to be successful in this, it is only necessary that each of our subscribers should take pains to inform us of whatever is of interest, educationally, in his own vicinity. We shall be obliged to depend largely upon our subscribers for local information, and would thank any one to favor us with news as above mentioned. Any change in school principals, within the State or between this and other States, improvements in town or city school buildings, meetings of teachers' associations or institutes, movements of prominent educational men, and other items of like character, will be gladly noticed.

MASSACHUSETTS.—From the *Teacher* we learn, Supt. J. D. Philbrick, of Boston schools, has been granted a leave of absence from April till September, during which time he will visit Europe and be present at the Vienna Exposition. Few men are better qualified by experience to see all the educational representations of the world and bring home the best features of each. His journey will not only benefit the city schools, but as one of the most active members of the State Board of Education he will learn much that will be of service to the Normal schools of the State.

The following resolution was unanimously adopted by the school committee of Newton: "Whereas it has come to the notice of the board that the expenses of the graduating class of the high school have grown to an unwise amount, which makes it a burden to some of the scholars to graduate unless they separate themselves from the

class in these matters ; therefore, *Resolved*, That the committee recommend to the pupils great moderation in regard to these expenses."

Henry L. Pierce, the newly elected Mayor of Boston, is a graduate of the State Normal School at Bridgewater.

The State Teachers' Association of Massachusetts, held its twenty-eighth annual meeting at Worcester, on the 26th, 27th and 28th of December. Pres. Chadbourn, of Williams College, gave the principal lecture, on "The World and the School-room." In the course of the lecture, he said, "The salaries of teachers are too small, their work is sadly underpaid, but they must not for that reason slight their work ;" this is true, every word of it. We judge from the report in *The Teacher*, that the papers and discussions were very profitable.

Messrs. J. D. Philbrick, Walter Smith and Charles C. Perkins, in behalf of many others interested in art education, have presented a memorial to the Massachusetts Legislature, asking for a sum not exceeding \$15,000, to be expended in establishing a normal art school for the State, where a fitting education can be obtained by all persons who desire to qualify themselves to act as teachers in industrial art schools. It is intended that instruction should be given by competent professors in free hand, geometrical and mechanical drawing, in the principles of design, in perspective, in modeling, as well as water-color and oil painting. Lectures upon all these branches would be given during the term, and all necessary implements of study, such as solid models, flat examples, casts, colored prints, original water colors, desks, etc., etc., provided. The petitioners have obtained the opinion of leading manufacturers and influential persons upon this project, showing that the need of proper instruction in drawing is felt throughout the State by all persons engaged in industrial pursuits, and that this need can only be supplied by an art-training school.

WISCONSIN.—Prof. J. J. Bushnell died on Saturday, March 8th, at 4 o'clock p. m. A violent attack of typhoid pneumonia finished its fatal work in less than one week. The funeral exercises took place on Tuesday, the 11th inst., at 3 o'clock, p. m., in the First Congregational Church. His financial abilities had done much for Beloit and for Beloit College. He was for twenty years connected with the college, and was mathematical professor at the time of his death.

NEW YORK.—The twenty-eighth anniversary of the State Teachers' Association will be held at Utica, July 22d, 23d and 24th. Every effort is making by the executive board, to render this meeting one of the best educational gatherings in the State.

ILLINOIS.—*Shelbyville*.—A copy of the *Shelby County Union* contains a long letter about the Shelbyville schools, from a correspondent who had recently visited them. The writer speaks in high terms of Supt. Hobbs, of Miss Florence A. Brown, of the high school, and Miss Phebe C. Burgert, of the primary room; the other teachers are not mentioned by name. We have no doubt these teachers deserve all the good words that are spoken of them.

But, in another column of the same paper, we see it stated that Miss Brown has just resigned her place to accept a situation in a wholesale publishing house in St. Louis. Miss Mary Howard, of the Springfield High School, will take Miss Brown's place. Miss Brown is to receive \$1,500 per annum in her new position. Thus our best teach-

REPORT OF ATTENDANCE FOR FEBRUARY, 1873.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
Chicago.....	31,820	20	29,683	27,975	94-2	8,329	.....	J. L. Pickard.
Cincinnati, O.....	25,068	20	21,050	20,028	95	7,271	.....	John Hancock.
Terre Haute, Ind.....	2,437	20	2,313	2,141	92-5	1,246	560	Wm. H. Wiley.
Evansville, Ind.....	4,014	20	3,309	3,002	89-4	1,804	300	Alex. M. Gow.
Decatur, Ill.....	1,544	20	1,442	1,360	94-4	265	685	E. A. Gastman.
Freeport, Ill.....	1,471	20	1,222	1,134	92-8	464	.....	Chas. C. Snyder.
Rock Island, Ill.....	1,384	20	1,246	1,170	94	173	550	J. F. Everett.
Darville, Ill.....	1,059	20	961	867	90-2	410	260	J. G. Shedd.
West and South Rockford, Ill., }	1,131	20	1,078	994	92	265	268	{ J. H. Blodgett. { O. F. Barbour.
Lincoln, Ill.....	1,040	20	743	675	91	561	301	Israel Wilkinson.
Macomb, Ill.....	640	20	598	572	95-6	10	332	Matthew Andrews.
Marsalstown, Iowa....	639	20	587	560	95-6	51	362	Chas. Robinson.
Cedar Falls, Iowa.....	633	19	584	530	90	644	159	J. K. Sweeney.
Princeton, Ill.....	618	23	575	544	94-2	110	206	C. P. Snow.
East Denver, Colorado.	619	20	539	456	84-7	910	81	F. C. Garbutt.
Shelbyville, Ill.....	519	20	486	426	87	192	139	Jephthah Hobbs.
Polo, Ill.....	517	20	473	435	91-8	23	143	J. H. Freeman.
Chas. City, Iowa.....	482	18	441	386	87-7	619	89	Irwin S. Shepard.
Marengo, Iowa.....	421	20	369	335	91-3	77	115	C. P. Rogers.
Sandwich, Ill.....	411	20	386	353	91-2	37	113	Harry Moore.
Edwardsville, Ill.....	4-4	20	.....	350	86-6	27	147	Il. H. Keebler.
East Mendota, Ill.....	394	20	369	331	92	164	138	J. R. M. Gregor.
Mattoon, West Side, Ill.	369	22	325	313	96-3	88	161	W. H. Lanning.
Rochelle, Ill.....	361	20	340	327	96-1	23	188	P. K. Walker.
Normal, Ill.....	352	20	328	294	87	159	96	Aaron Gove.
Albia, Iowa.....	341	20	311	293	94-2	32	117	Cyrus Cook.
Knoxville.....	321	20	298	274	95-2	.....	69	M. H. Ambrose.
Lexington, Ill.....	299	20	282	266	94	.....	.....	Daniel J. Poor.
Belvidere, Ill.....	283	20	272	245	90	35	83	H. J. Sherrill.
DeKalb, Ill.....	281	19	276	243	88	139	63	Etta S. Dunbar.
Escanaba, Mich.....	257	20	225	2-5	92	64	74	N. E. Leach.
Martinsville, Ill.....	250	22	190	176	92-6	59	52	C. M. Johnson.
Toledo, Iowa.....	246	20	231	213	88-5	136	70	A. H. Sterrett.
Shelfield, Ill.....	241	23	213	180	84-5	105	42	J. A. Mercer.
Blue Island, Ill....	229	...	208	.....	91	18	153	M. L. Seymour.
Altona, Ill.....	200	22	196	147	75	120	73	J. M. Stickney.
Maroa, Ill.....	191	22	161	146	90-3	.....	50	Jas. Kirk.
Benton, Ill.....	173	20	161	145	90	73	59	G. W. Hill.
Lyndon, Ill.....	147	20	139	120	86	57	21	O. M. Crary.
New Rutland, Ill.....	145	19	117	103	88-3	58	26	Walter Hoge.
Ridott, Ill.....	100	20	86	77	88-8	43	24	C. W. Moore.
Denison, Iowa.....	100	25	91	79	86-8	149	.....	Z. T. Hawk.
Peoria.....	2,363	20	2,156	2,023	93-8	192	.....	J. E. Dow.
Yates City.....	204	21	170	156	92	.....	112	A. C. Bloomer.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

ers are tempted away from the work, one after another; and yet, short-sighted people sometimes complain that teachers get too much salary. We have said before, and we will stick to it,—“it is the opinion that fire cannot melt out” of us,—that a teacher who has brains, and energy, and culture enough to teach a good school, can make more money at some other business.

Macomb.—Supt. Andrews sends the SCHOOLMASTER more names, and good words; he says, “I hope the time will come ere long, when the teachers of Illinois will make it possible and necessary for a man to devote his whole time and energies in editing *their* magazine. Push toward that; I will do my best to bring about this result.” Thank

you, friend Andrews; we are aiming that way; and, if every town of the size of Macomb had a man who would do what you are doing, the day would not be far off.

The annual examination of the Macomb schools began on the 13th of March.

Peoria County.—Our Normal School has nothing new in its experience. Our members, thus far, considerably exceed those for the whole of last year. One of the largest meetings of the county institute ever held, met Saturday in our building, and had a profitable day. Pres. Edwards was with us, and gave new impulse to the determination of those present. It is proposed, to hold summer sessions in the nature of excursions, to parts of the county, having some scientific interest; the forenoon being spent in rambles, under the leadership of some one familiar with the geology or botany of the region; and at noon lunch at the school-house. In the P. M., the institute will listen to reports from those in the lead of the parties of the morning, and have such other exercises, as is deemed advisable. This is an experiment, which we hope to make successful.

Lee County.—DIXON.—The schools under Mr. E. C. Smith on one side of the river, and Mr. J. V. Thomas on the other, are healthy, as the following from Mr. Smith tells: "I am happy to say that the efficiency of the school has been greater than we could expect, and on the whole, I am quite well satisfied with the winter's work." With those who know the Supt's at Dixon, these words mean something.

Knox County.—From a good school in this county, we have: "I find some things connected with the school, strongly stamped in the direction of seeking after popularity; the plan here is, to keep the principal busy in his own room, leaving little, or no time for supervision in the other rooms. I have no assistant in my room. Programme:—Opening exercises, 15 min.; Latin, 20 min.; Const. U. S., 20 min.; Algebra, 30 min.; Recess, 15 min.; Eng. Lit., 30 min.; Spelling, 15 min.; Writing, 30 min.; Intermission, 60 min.; Nat. Phil., 30 min.; Grammar, 30 min.; Algebra, 30 min.; Arith., 35 min.; Gen. Ex., 10 min. You will see from the above, that I have but little time out of my own room. I am favored with good teachers in the other departments."

We hope our Knox county brother has a good appetite.

LaSalle County.—This large and flourishing county is working well up to a high standard in public schools. The superintendent, Mr. R. Williams, has spent years in the school-room, and is moving in school matters with a *vim* that is felt in all the districts; LaSalle will stand near the head in the State in education, as she does in population and wealth. No public institutions are located here; every thing moves upon its own merits, without help of outside patronage. The following quoted from a letter just received, shows the prevailing sentiment: "It is the do-nothing class of men, who are chronic railers at our public schools. Let one of these men but put an honest shoulder to the wheel, and he will for the first time realize the inherent difficulties of the situation."

Cook County.—We have received Supt. Lane's report for the year ending October 1st, 1872; we cull from it the following items, in which the city of Chicago is not included—whole number of teachers, 328; number of certificates issued, 387; of which number, 263 were given to women. About one-fifth of the certificates were first grade; this is true for teachers of both sexes. The average monthly salary of male teachers is \$65.45, of female teachers, \$47.26; highest salary of male teacher, \$200; lowest, \$35;

highest salary of female teacher, \$100; lowest, \$28. Whole number of pupils enrolled in public schools, 12,091; in private schools, 2,064. The cost of instruction averages a little higher in the country districts than in the city. Whole number of pupils enrolled in the county Normal school for year ending July 1st, 147; of these, 26 were young men; whole number enrolled from beginning of school, 316; of these, 86 have graduated. The school is in need of more accommodations for boarding. A large part of the report is taken up with the course of study for the graded schools, and with the new school law of the State. Supt. Lane, reports gratifying progress in the schools, and commends the efficiency of the teachers who have been trained in the Normal school.

Trip to Europe.—Messrs. Cook, Son & Jenkins have projected for teachers and others of similar tastes, a trip to Europe during the coming summer vacation. The ship containing the party will leave New York on Saturday, June 28th, and land at Glasgow about July 9th. Arrangements will be made to accommodate on the vessel and throughout the trip one hundred and fifty persons. These will be divided into sections, and a conductor will accompany each section. All fares on ships, steamboats, railroads, etc. and all hotel bills and servant fees will be paid by the company who have had considerable experience in the business. The traveler will have no trouble with tickets, bills, passports, etc. The cost of the entire excursion will be \$400 in gold. Beyond this sum little money will be needed, except for making purchases or for purely personal expenses.

Several routes will be opened to the excursionists after landing at Glasgow, but the following programme is proposed:

The route will be by steamer to Glasgow, thence to Edinburgh, passing through Loch Katrine, Loch Lomond, The Trossachs, and stopping to view the famous castle at Stirling; from Edinburgh to Melrose, to see the Ruined Abbey, and to Abbotsford, the home of Sir Walter Scott; then to London, stopping for a day at Alton Towers, the property and residence of the Earl of Shrewsbury, the handsomest baronial hall in England, with the finest gardens in Europe; from London to Cambridge, to see the famous University; then over the German Ocean and up the river Scheldt to Antwerp, and by rail to Brussels and Cologne; from Cologne we go by rail up the Rhine to Bonn, where an opportunity will be had to see its famous schools, after which we will take the steamer on the river to Bingen or Mayence, then *via* Darmstadt, Aschaffenburg, and Wurzburg to Munich, the capital of Bavaria; then to Vienna *via* Salzburg and Linz. After spending sufficient time to see the Great Exposition, our return will be commenced to Munich *via* Passau and Regensburg; then to Augsburg, Lindau, and over the Lake of Constance to Romanshorn, and rail to Winterthur, Schaffhausen, Zurich, Zug and Lucerne; then by steamer on Lake of Four Cantons to Alpnach, where we take the Diligences of the Federal Post over the Brunig to Brienz; then across the lake Giesbach, where the wonderful illuminated waterfall is to be seen. Next morning we go to the Interlaken for a look at the "Yungfrau," and go to Berne, by lake and rail, to sleep; then to Lausanne and Geneva; from Geneva to Paris *via* Dijon, and Fontainebleau; then back to London by Rouen, Dieppe and New Haven; from London to Glasgow, where the steamer will be taken for New York on Wednesday, August 20th; due in New York August 31st. Thus furnishing one of the grandest excursions ever planned, embracing nearly all places of interest in Continental Europe as well as Great Britain.—*Penn. School Journal*.

ILLINOIS NORMAL.

Dr. Sewall has made some valuable additions of instruments and apparatus to the chemical and botanical departments of the Normal University. In addition to a full and complete stock of chemicals and ordinary chemical apparatus, he has purchased one of Beck's best binocular microscopes, with seven object glasses, from 1½ to 1-20th focal length, acromatic condenser with revolving diaphragm, parabolic reflector, polarizing apparatus, &c. Also, a Jaussen-Hofman direct-vision spectroscope, with a fine collection of Plucker's and Geissler's tubes, for the investigation of the spectra of gases, and a Ruhmkorff coil, capable of throwing a two-inch spark.

The optical instruments came from the well-known house of J. W. Queen & Co., 601 Broadway, New York, and the chemical apparatus from the house of E. B. Benjamin, 10 Barclay street, New York.

The Dr. intends to leave the best arranged and best stocked laboratory that can be found in any normal school in the United States. When he came here, he brought with him all the apparatus and all the chemicals that he used for several years. For his successor he hopes better things.

Gov. Beveridge has re-appointed Hon. W. H. Green, of Cairo, Dr. Calvin Gowdy of Taylorsville, T. R. Leal, Esq., of Champaign and E. A. Gastman, Esq., of Decatur, members of the Board of Education for six years. They are all old and tried friends of the Normal; and they will no doubt continue to work, as they ever have, for the best interests of the Institution.

During the last four weeks, there has been an unusual amount of sickness among the pupils of the University. There is usually considerable sickness at this season, although the health of the schools was remarkably good this year, until about the 20th of February. Since that time, in addition to the colds incident to the breaking up of winter, measles and mumps have added their contingent, thus making serious inroads on the working force of the schools. None of the sickness, however, has been of a very alarming character.

We wonder, if we shall have to pass through another winter without some better provision for heating and ventilating the University. Frequently half of the rooms are so cold, that they cannot be used with either comfort or safety; and, as for ventilation, there is none; the lack of it is a disgrace to the State.

NOTES.—In compliance with the suggestion of United States Commissioner Van Buren, Messrs. Wilson, Hinkle & Co., of this city, are about sending to Washington, to be forwarded thence to Vienna, a complete set of their publications, comprising a hundred volumes. They are intended for exhibition in the educational department of the International Exposition, after which they will be donated to the Strasbourg Library. The books are packed in a handsome oiled walnut case, manufactured expressly for the purpose, making a fine display. Any one wishing to see what Cincinnati is able to do in this line can have his curiosity gratified by dropping in at Wilson, Hinkle & Co's office any time.—*Cin. Gazette*.——If the ILLINOIS SCHOOLMASTER is a good teachers' monthly, induce your friends to remit to the publishers \$1.50. It will help to make the magazine better.

BOOK TABLE.

No notices are ever inserted in this department, for which a price is paid. The BOOK TABLE of the SCHOOLMASTER is entirely independent of outside influence. Books are discussed upon what appears to the reviewer to be their intrinsic merits. The primary object of our book notices is to give to our readers the benefit of the opinion of the SCHOOLMASTER. All books sent to us are thankfully accepted; we are desirous of receiving all new works. The reviews may not always be just, but they certainly will come from the pens of fair-dealing and unprejudiced persons, and will be written only for the benefit of others, never for pecuniary reward.

An American Dictionary of the English Language by NOAH WEBSTER, LL. D. G. & C. MERRIMAN, Springfield, Mass., 1873.

A Dictionary of the English Language; NATIONAL PICTORIAL DICTIONARY—G. & C. MERRIMAN, Springfield, Mass.

There are a few books in our land of which it can truly be said "one is a library in itself."—Webster's quarto is one of that few. With a vocabulary of over one hundred and fourteen thousand words, and appendices containing *explanatory and pronouncing vocabularies* of the names of noted fictitious persons, places, etc., modern geographical names, and common English Christian names with their equivalents in several other languages: Scripture, Greek, Latin, Geographical and Biographical, names; explanatory tables of quotations from Greek, Latin and modern languages; abbreviations used in writing and printing, and arbitrary signs used in written language.—All these in one volume, constitutes truly a book that all students are ever pleased to have at hand.

The National Pictorial is ample for ordinary use, is more convenient for ready reference, in that it is less bulky than the quarto.

While we cannot agree with the *Iowa School Journal* that all other dictionaries should be banished from our use, we are glad to add our testimony to the inestimable value of Webster.

National Educational Association.—The volume of proceedings of the last session of the National Educational Association is now published. It contains 288 pages, medium octavo size, and is neatly printed and substantially bound in muslin. A glance at its table of contents will satisfy every one interested in education of its great value. No other volume of the year contains so much valuable thought upon important living educational topics, and the results of so much experience in connection with the practical workings of educational systems, as this.

It contains, with only one or two exceptions, the papers read and lectures and addresses delivered before the association, and full stenographic reports of most of the discussions, and quite complete abstracts of the rest. Attention is invited to its table of contents.

The price of the volume, post-paid, is \$1 75. Parties desiring it, can obtain it by sending their orders, with money accompanying, to S. H. White, chairman of publishing committee, Peoria, Illinois.

Rambles Among Words; Revised edition, by WILLIAM SWINTON, A. M. IVISON, BLAKEMAN, TAYLOR & Co., New York and Chicago.

This little book of 302 pp, is very well printed on nice paper, and presents an at-

tractive appearance. It treats of a subject that has much fascination for one who has had his interest turned to it. The peculiarities of words, their history, relations and different uses present a field of study that is not only entertaining, but highly instructive even to the mere English scholar, if only he has learned to use a dictionary, and to think a little. The writings of Dean Trench, Grant White, and others on this subject are very valuable; and we do not hesitate to say that, in our opinion, Mr. Swinton's book is calculated to instruct, and to arouse an interest in this study, particularly in the minds of young people. The book contains twelve Chapters, or "Rambles," as they are very appropriately termed. Some of the topics discussed are "History in Words," "Words of Abuse," "Ethics in Words," "Peculiarities of Names," "Synonyms and their Suggestions," "The growth of Words," etc. The book shows considerable thinking and reading, and is copiously illustrated by quotations, especially from old writers. We would recommend it as a suggestive book for teachers.

We are told in the preface, that these papers were written twenty years ago, when the author was in his teens, for Putnam's Magazine; and that they are reprinted "with all their imperfections on their heads." We are rather sorry for this, for certainly much of the book is very faulty in style; such sentences as the following, we would not recommend as models for study or imitation. "It is the sum of the uses of precedents, to a live nation, that it shall match the same with better from its own soul, and consume them before its audacious improvisations," p. 288. "Audacious aspirations arise. A lofty augury beckons on to new cerebral and spiritual shores." "Always, language is incubated by the mind of the ages," p. 287. "This is the spine on which the structure of our speech is hung," p. 272. The author complains, on p. 289: "Books cling to the old traditions and timidities—no full, free utterance, untrammelled, mystical: No influx, no abandonment." Certainly this cannot be said of *his* book; much is mystical, and there is plenty of abandonment. His bombastic apostrophe to Carlyle, on p. 186, is decidedly boyish. Some of his assertions may well be questioned, as "There is no History of the English Language, nor any Dictionary of the English Language," p. 267. Some of his Etymologies, too, we think are more than doubtful. A writer on words ought not to allow himself to use such an abomination as "gents," p. 162. And why will he say *will* for *shall*, as he does on p. 42, and in many other places? We recommend him to consult *Swinton's Grammar*, p. 128. Again, we recommend him to read p. 117 of the same text-book, when he is tempted to say "in regard of," as he does on p. 273.

Notwithstanding these blemishes, which we could wish were wanting, we have read the book with much pleasure, and cordially recommend it to our fellow-teachers.

Our World, or First Lessons in Geography, and Our World, No 2, or Second Series of Lessons in Geography; by MARY L. HALL. GINN BROTHERS, Boston.

What shall be done to make the study of geography possess both interest and value for the pupils of our schools? This is a question that has recurred again and again, of late years, to all thoughtful persons who have given the subject any attention. The conviction has been gaining strength that the teaching of mere isolated facts is neither scientific nor profitable; these facts so taught neither interest the pupil nor stay in his memory. What can be done to fix some of the leading facts in the pupil's mind, to present them in their true relations to each other, and to arouse such an interest that the learner will continue to gather and to arrange geographical facts when it is no longer

required as a school task? It is certain that the desired results can never be obtained from the old style of school geography,—at least, not without a teacher who is able to achieve good results in spite of bad text-books. In these books, the author has attempted something quite out of the common line; and it gives us pleasure to say that we think she has produced some books that promise well for the desired result.

The little book, a small quarto of 113 pp., is intended to answer all purposes for the lower grades of pupils. We read in the preface: "I have endeavored to teach localities chiefly by associating them with whatever of physical or historical interest they may have; believing the aim of such a text-book should be, not merely to give facts, but to inspire sympathy with far-off nations, and to create a desire to learn more." The book seems a wise carrying out of this thought; in fact, we are told that it grew out of the writers own work in the school-room. It is not a mere collection of fragmentary sentiments to be committed to memory, but runs on in narrative style, often in highly picturesque yet simple language; in the margin are questions to aid in the work of recitation. It is well illustrated with very neat maps and pictures; in fact, the whole appearance of the book leaves little to be desired. The introduction to the study of maps pleases us, although we think it is rather too brief. We should very much like to see a skillful teacher use this book with a class of children; we should expect gratifying results.

By way of adverse criticism, we note several points. The definitions are nowhere put in brief, exact language. There is no guide to the pronunciation of names; this is a serious want. We think that vapor can be seen before it "falls in rain," p. 22. Circles do not pass *around* the earth, p. 23. The sun rarely rises in the *East*, and sailors do not guide their course simply by watching the *sun*, p. 25. It is not "forever bitter cold winter" in the Arctic Ocean, p. 33. "Thousands" of islands scattered over the Atlantic, is putting it "rather strong," p. 37. The last sentence on p. 36 needs revision. The llama is not mentioned as a beast of burden among the Andes, p. 43. We think volcanoes are not "most numerous" among the Andes, p. 48. We believe the main stream of the Danube does not "begin among the Alps," p. 52. It is some time since Louis Napoleon ruled "in France," p. 67. We think the old statement in respect to the articles of food sold in Chinese markets, as given on p. 79, has been modified by later researches. Each colony in America was not "ruled by a governor sent from England," p. 91. Cape Horn is not the "extremity of Terra del Fuego," p. 94. The language is generally good, but we object to "no end of," and "couple" for *two*, as found on p. 36.

The larger book, a large quarto of 176 pp., is made on the same general plan as the smaller one, and possesses, in a general way, the same excellences. There is good attention given to the main facts of what is commonly called *physical* geography, and *history* is not neglected; this is well. The different regions of the earth are treated of in *sections*, and not in such isolated patches as a single state or country may occupy. We refer to pp. 37, and 49, 50, etc., as samples illustrating what we have just commended. Such "Review Questions" as are found in p. 24 please us. These *two* books are intended to make a sufficiently full course in geography for all ordinary schools; this is as it should be. The maps, in their beauty and general accuracy, we think surpass those in most school geographies; but we think there is a neglect of map-drawing.

But we find some things in this book which we do not like. The sun does not

often come to the meridian "just at noon," p. 4. Heated air will not "rise" any sooner than cold air, p. 5; it rises when it is *forced to rise*. The explanation of the tides, on p. 8, is not good, as it usually is not. The account of the expulsion of the Acadians, on p. 42, we think not quite correct. The picture of the falls of St. Anthony, on p. 73, is twenty years behind the times. The Tambo river and the city of Popayan are incorrectly represented on the map, p. 92. Tapioca is not the "flour" from the root of the Manioc, p. 153. The list of cities on p. 172, needs correcting. The book has a pretty extensive Pronouncing Vocabulary, but we are quite sure that there are some scores of incorrect pronunciations given.

We are not sure how these books will work in the class-room, without a trial of them. But we hail their appearance, because we believe their aim is in the right direction; and we think they promise to be successful.

A Shorter Course in Literature, English and American. By JOHN S. HART, L.L. D. Phila.: ELDREDGE & BROTHER.

This volume is an abridgment of the two larger works by the same author—one on English Literature, and the other on American Literature. We learn from the preface that it has been prepared by the author for the use of those schools in which it is impracticable to devote to the subject of literature the amount of time needed to master the larger works. We have examined this volume with considerable care without being able to discover in it much that is worthy of commendation; we do not see how much good can be done by using it as a text book in literature. Such a book should contain something more than a list of names of authors with dates of birth and death and the titles of the principal productions of each. Even the addition of a few common-place remarks upon the literary character of some of the leading writers is not sufficient to establish a claim to favorable consideration. A dictionary of authors, with a catalogue of names approaching completeness, is valuable for reference; but the volume before us is obviously unsuited for this use. No one at all familiar with English or American literature can turn over these pages without missing the names of many who have won for themselves a wider and more enduring reputation in the literary world than can be claimed for a large part of those found here. Our author, moreover, shows a manifest want of discrimination in the comparative prominence given to different writers. Shakspeare receives no more notice than Bishop Wilkins or Robert Southwell. The three Alexanders,—Archibald, James and Addison,—who chance to have been connected with the institutions of learning at Princeton, are given nearly three pages, while Prescott, Everett and Bryant are disposed of within the limits of a single page. Many other similar instances might be cited.

The literary criticism—in the few cases in which anything of the kind is attempted—is stale, flat, and unprofitable. But what value is to be set upon the critical judgment of one who places Beulah and St. Elmo in the same category as Jane Eyre and Vilete. And what can our author mean where he says of Washington that he "was so immeasurably great in other respects that it seems almost a profanation to speak of him as a writer"?

The text-book in literature is one of the most important books placed in the hands of our pupils. It should be of such a character as to awaken an interest in the subject of which it treats; to cultivate a taste for good reading, and to aid the learner in selecting those authors most worthy of his attention and study. This book is fitted for none of these purposes.

BOOKS AND PAMPHLETS RECEIVED.

- An Elementary Geometry and Trigonometry*, by WM. F. BRADBURY. Boston: THOMPSON, BIGELOW & BROWN.
- Shakespeare's Merchant of Venice, King Henry the Eighth, Comedy of the Tempest, and Julius Caesar*; edited by WILLIAM J. ROLPH. Published by HARPER BROTHERS. Four volumes.
- Fourteen Weeks in Human Physiology*, by J. DOLMAN STEELE. A. S. BARNES & Co.
- Collections of the Minnesota Historical Society.*
- Clark's Beginner's Grammar.* A. S. BARNES & Co.
- The Elementary Music Reader.* B. JEPSON. A. S. BARNES & Co.
- Thompson and Bowles' System of Penmanship.* WILSON, HINKLE & Co. Cincinnati, O.
- Forty-third Annual Report of the Common Schools of Cincinnati.* JOHN HANCOCK, Superintendent.
- Ninth Annual Report of the Terre Haute Public Schools.* WILLIAM H. WILEY, Superintendent.
- Fourteenth Annual Report of Springfield, Ill.* J. C. BENNETT, Supt.
- First Annual Report of Cook County, Ill.* ALBERT G. LANE, Supt.
- Thirty-sixth Report of the Board of Education of Mass.* JOHN D. PHILBRICK.
- Annual Report of Board of Education, Burlington, Iowa.* WM. M. BRYANT, Supt.
- Annual Report of Public Schools, etc., of Ontario.* E. RYERSON.
- Catalogue of the Lebanon Normal School, O.* ALFRED HOLBROOK, Pres.
- Catalogue Appleton Collegiate Institute, Wis.* HENRY W. SHERWOOD, Principal.
- Proceedings of the Fourth Annual Session of the American Philological Association.* ASAHEL C. KENDRICK, President.
- Transactions of the Wisconsin Academy of Sciences, Arts and Letters, Madison, Wis.* DR. J. W. HOYT, President.
- Catalogue of the Loquet Institute, New Orleans, La.* MISS M. A. BURR, Principal.
- Catalogue of Norwood School, Va.* WILLIAM D. CABELL, Principal.
- Moral Education in the Public Schools, St. Louis.* W. T. HARRIS, Supt.
- Annual Report of State Superintendent of Minnesota, 1873.*

PERIODICALS.

The *Popular Science Monthly* has just reached its first anniversary, but it has won a position in the estimation of the thinking portion of the community which is usually secured only after a probation of many years. It was started for the special purpose of diffusing scientific knowledge among the intelligent reading classes of the country. It is filled, to a large extent, with articles selected from the leading scientific journals of England and the continent, but every number contains some original contributions from the foremost thinkers of the age. Its matter is all solid and valuable—such as one would like to preserve. Mr. E. L. Youmans, the editor, is a man of much energy and enthusiasm, and he imparts not a little of his own spirit to his journal. Though it has something of the dogmatism of modern science, yet no one who wishes to be up with the times in scientific matter can afford to be without it. Published by D. Appleton & Co., New York, at \$5 per annum.

The *Penn. School Journal* for March, is before us. We take from the editorial department the item on a trip to Europe. If our Illinois readers are looking for a second magazine, we are sure the *Pennsylvania Journal* will please them, both in quantity and quality. The editor, G. P. Wickersham, is able and experienced.

The *National Teacher* for March, contains an article from W. H. Young, on the *Educational system of Baden*, which is full of new and interesting information. It is difficult to find a statement of the condition of schools in a European country as clear and terse as is this. The *March Teacher* is full of good things.

The *New York School Journal*, a paper published weekly, and devoted especially to school news, statistics, etc., is one of our welcome exchanges. It is edited and published by George H. Stout, at \$2.25 per year.

The *New York State Educational Journal*, Vol. 1, No. 5, is a vigorous number. "Are schools better than they were?" and "Half-time schooling" are two subjects that concern the real arguments and issues of the day.

American Sunday-School Worker.—We have received the March number of this magazine which has entered its fourth year. In its Sunday-School Lessons it follows the popular course known as the international course of lessons. This is regarded as one of the best Sunday-School journals of this country. Many teachers take several journals this year to aid them in explaining the same lessons. We advise schools about adopting a course of study, to send for specimen of this journal for examination. Subscription, \$1 50 per year, single copy 15 cents. The publisher is J. W. McIntyre, St. Louis, Mo.

PUBLISHERS' DEPARTMENT.

On the inside cover page of this number is a cut of the immense establishment of A. H. Andrews & Co., school furnishers. This firm is one of the heaviest in the country, and with their present facilities will certainly be able to keep well up to time on their orders.

The Chicago office of the firm of Ivison, Blakeman, Taylor & Co., in charge of Mr. Edward Cook, has been re-located on the ante-fire site, 133 and 135 State street. The new quarters are commodious and convenient. We have something more to say next month, of this and other changes.

Messrs. G. & C. MERRIAM, the publishers, recently filled an order for 16 copies of WEBSTER'S UNABRIDGED, from Colombo, capital of the island of Ceylon, in the East Indies. During May, they had two orders from Japan, one of 80, and one of 36 copies; also, one of 12 copies from Constantinople: 99 copies also went to the China and Japan market in April, from San Francisco. Webster's Speller keeps up its sale of nearly one million copies per annum. The actual number for the past year was 979,204.—*Springfield Republican*, June 5

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER.
Volume VI.

ILLINOIS SCHOOLMASTER.

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VOLUME VI.

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THE MICROSCOPE AS AN EDUCATOR.*

That "life is short and art is long" is a saying as true and trite to-day as it was in years ago, when it adorned the otherwise spotless pages of our new writing-books, in connection with "Procrastination is the thief of time," and various other apothegms equally lucid to our juvenile comprehension. The brevity of life, human or other, is perhaps to no scientific investigator more constantly suggested than to him who has once caught a glimpse of what Pouchet calls the "Infinitely small." Compared with the denizens of that world to which the microscope alone gives us entrance, the tiniest ephemeridæ of the naturalist are Methuselahs in age and Brobdingnagians in size.

But wherein is the microscope specifically an educator? By *the microscope*, I understand, not the common double convex lens, or even a duplication or a triplication of the same; not the jimcracks which are extensively advertised throughout the country as compound microscopes, at prices ranging from one to five dollars each, warranted to show the *animalculæ* in water—the orthography being clearly indicative of the charlatanism of the advertiser,—or to show the tubular structure of the hair, or various other unshowable and incredible things, a knowledge of which no *clergyman*, *physician*, or *teacher* should think for a moment of existing without; not the last \$3 microscope which, in the words of the vender, is an optical wonder,

*Read before the Illinois State Teachers' Association, at Springfield, Dec. 25, 1872.

which reveals the thousands of hidden wonders of nature: is of permanent use and practical availability. It magnifies 10000 times, being thus equal in power to other microscopes of many times its cost. A prominent optician of the city of Boston very properly remarks as to this advertisement, that "such an instrument is *not* an 'optical wonder,' is *not* of 'permanent use,' and is *not* of 'practical availability.' Neither can any microscope, made and sold at any such price possess those qualities. It may magnify '10000 times' in area, but that is only 100 in linear dimensions, which is the only nomenclature now in use by microscopists; and one hundred linear is a very low power in modern microscopy, where powers of 500 to 1500 linear are in common use, and powers of 10000 linear are not uncommon. Mere magnifying power is a comparatively unimportant matter. A good performance of 50 diameters is preferable to a poor one of 100 diameters. Such instruments are not corrected either for color or sphericity, and no good performance can be obtained without [correction for] both. These instruments, from the above deficiencies, can be used only a very short time without injury to the eyes. No decent efficient instrument can be obtained under a cost of about \$50, and from that the prices run up easily to \$2000. *The only utility* of such inefficient *instruments* is that, now and then, they may come into the hands, or rather under the eye of some one whose curiosity or interest may be excited enough to induce him to procure a real microscope."

The editor of the current number of "THE LENS" vigorously characterizes the whole class of these cheap microscope-mongers as arrant swindlers. I quote from him a few lines, since they so well express the estimation in which should be held both those who manufacture and those who foist upon the gullible public the inexcusable monstrosities which they dare christen by the name of microscope. He says:

"There was a fellow in the West, a tinner, we believe, by trade—at any rate we never heard that he laid claim to any scientific attainments,—who, a few years ago, saw in the growing popular demand an opportunity to make a nice thing for himself at the expense of a too credulous public.

"A tube of tin, four or five inches long, in the lower end of which hung a bit of mirror, and in the upper end of which was a

slit, through which to place the object, constituted the stand. The lens was a drop of Canada balsam, which had been allowed to harden in a small circular hole in a piece of tin or sheet lead. Then, through the influence of the managers of a score of religious and literary newspapers (to whom it was furnished at a liberal discount), who hoped to add to their subscription lists by offering the worthless thing as a *premium* for subscriptions, and by the publication of extended commendatory notices and illustrated papers,—as, for instance, to figure *Trichina* with finely developed mouth and eyes at the posterior extremity,—by such means the “*Celebrated Gregg Microscope*” became known to fame; and, before its true character became known, had put several thousand dollars into the pockets of its makers.

“And what has been the result? Simply that 99 out of every 100 of the victims, finding themselves utterly unable to make the vile thing work, charge the blame not upon *this* “microscope”, but upon *all* microscopes, lose their faith in the adaptability of the instrument to popular use; and, except in rare instances, will ever discourage any attempt to prove to them the contrary.”

The microscope—costing, as has been said, from \$50 to \$2000—is a compound microscope, made by an honest man whose name is sufficient guarantee of the best workmanship, fitted with its eye-pieces, objectives, movable stages, draw-tube, polariscope, parabolic reflector, micrometers, animalecule cages, compressorica, refracting prisms, condensers, selenites, zoophyte-troughs, nose-pieces, etc., etc., according to the inclination of the intended user and the state of his exchequer.

Whether the acquisition of knowledge is *per se* educatory, is perhaps a question which the most finical hyper-critics leave yet undecided. I assume that a person is at least in a limited sense becoming educated, when he is simply familiarizing himself with the names and uses of the various parts of our real microscope and its accessory apparatus.

A very particular friend of mine, a gentleman of broad and liberal culture, thinking of purchasing a microscope, borrowed one of an acquaintance to learn something of its capabilities. I met him the next day. Said he: I sat up with that microscope last night from half-past seven o'clock till one, and when I retired I was no wiser than when I sat down. I could see nothing. It needed but a few minutes conversation to discover the difficulty. The gentleman, like most beginners in microscopy, was exceedingly anxious to make everything

look as large as possible. There could be no greater mistake. He had not the requisite delicacy of manipulation acquired only by much experience, to get an object in focus of his objectives of high power, hence the unpleasant result, even after a long evening of patient effort. By beginning with his objective of lowest power, and his shallowest eye-piece, he succeeded the following evening in obtaining excellent results. Even when the requisite skill in manipulation has been acquired, it is far more desirable to keep the amplification within reasonable limits. The least reflection will convince one that the more he magnifies the proportions of the object under investigation, the more is the light dispersed, and with all combinations of lenses, there must hence be a limit beyond which the definition is totally unsatisfactory. This suggests the essential characteristic of a good objective, to-wit: perfect definition, combined with desirable amplification. The greatest discoveries with the microscope have doubtless been made by the use of a power not exceeding from 25 to 100 diameters, notwithstanding objectives have been constructed which, with high eye-pieces, give powers of 3000 or more diameters. These results by a secondary process may be so enlarged as to warrant the statement in the quotation just made, that "powers of 10000 linear are not uncommon."

This acquired delicacy of touch comes profitably in play, when it is desired to preserve minute objects for subsequent inspection under the microscope. It is nothing uncommon to find on sale at the opticians, slides of diatoms, the individuals being positively invisible to the naked eye, arranged in regular geometric figures, by the artistic skill of some cunning manipulator. *Mechanical fingers* have been constructed by which under the microscope, things seemingly impossible in the matter of arrangement, have been accomplished with comparative ease. The larger of Moller's so-called *diatomaceen-typen-platte* contains specimens of *four hundred* different species of diatoms, regularly arranged in rank and file, all occupying the space of but one one-hundredth of a square inch. So extensive is this series that in the words of the opticians' catalogue, a "handsomely bound explanatory book" is requisite to make the plate of scientific value to explorers in this department of science. The specimens are registered similarly to Uncle Sam's method of arranging his western surveys; Township 3 N., Range 7 E., &c.

Even this success has failed to satisfy human ambition in this direction. What next? The so-called test-plate of Nobert is a glass slide three inches long by one inch wide, on which, within the space of less than one-fiftieth of an inch linear, are ruled nineteen bands of parallel lines, some of which are of such exquisite fineness as to have baffled, until very recently, the utmost skill of the best microscope makers in striving after their resolution. One hundred thousand parallel lines, ruled mechanically within the compass of an inch linear, may well startle any one who has ever thought of the number of single things involved in one hundred thousand. Yet thus near are the lines ruled in the nineteenth band of Nobert's test-plate.* How does he do it? *He* knows. His machinery is all set and his glass plates in position for ruling. It is believed that only when night approaches, however, does he set himself fully at the work which has made him world-famous, for the wonted noise of the street by day would seriously interfere with the successful working of his delicate machinery. And it is said that even he never sees its working. He is loth to have the simple currents of air excited by his bodily presence, interfering with the anticipated results of his toiling ingenuity.

The use of the microscope has not only satisfactorily determined questions long in dispute among scientific men, and corrected a great many errors previously industriously promulgated by tyros in science, but it has on the other hand opened for further discussion, questions which had been deemed already definitely settled.

The abundant presence of living animalcula in water obtained from whatever source, is even now thoroughly believed by many whose opportunities for investigation have been limited, and many teachers can scarcely be made to believe that the most powerful lenses fail to discover living forms in water ordinarily used for domestic purposes.

The infusorial animalcula in general seem to be professional scavengers. Those which refrain from making their repasts on decaying organisms, animal or vegetable, are at least satisfied with gorging similarly organized creatures, possibly of a smaller type, which have

* Since writing the above I have been informed that Nobert has recently made a test plate on which he has ruled a *twentieth* band, the lines of which are but *one-two-hundred-and-forty-thousandth* of an inch apart.

previously devoted themselves to a very extensive but very necessary scavenger work. It is hardly possible to avoid a reflection at least, as to their probable origin. Experiments have been tried again and again, which seem to show with but little doubt, that the air we breathe is constantly filled with the germs of animate existence. If water be brought to a temperature of 212° Fahrenheit,—a heat supposable able to destroy every vestige of animal life,—and then left in an open vessel for a few days, it is easy under the microscope to detect within it numerous forms of living organisms. The number of these will be almost indefinitely increased by adding to the water before exposing it to the air, a little chopped hay or any other readily decaying vegetable matter. If, however, the mouth of the vessel containing the water be loosely filled with cotton in such a way as to exclude the passage of everything but the atmosphere, it is claimed that no animalcula will be found in the infusion, howsoever long the experiment may be conducted. The cotton is supposed to act as an air filter, and hence there are no germs to develop life in the water, as when it stood fully exposed to the atmosphere.

On the other hand, the recent experiments of some French *savans* are presumed to show that in numerous instances generation is positively spontaneous. If the experiments are well conducted, and there is no reason to suppose any intentional neglect, certainly there is at least a doubt thrown upon the hitherto generally received theory as to the origin of life. Doctors disagree. The doctrine of spontaneous generation is perhaps a difficult nut for the theologians of 1872 to crack, and yet they now admit many things which once they thought nearly blasphemous. They are now exercised more or less on the question of how much would be involved in their acceptance of so-called Darwinism. Whether Darwin and Huxley and Owens *et id genus omne* are to be characterized as madmen or not, Agassiz, who is their strongest scientific opponent on this side of the water, can hardly yet make himself even reasonably acceptable to the theologians. Whether we shall yet all become evolutionists, or simply adopt Agassiz's theory of various centres of creation, is a dilemma either horn of which is doubtless sufficiently disagreeable. It may be consolatory at any rate to reflect that in the history of the world, any newly enunciated truth is quite certain to be a long time with the minority.

(TO BE CONCLUDED NEXT MONTH.)

THE ROLL OF HONOR.

It is not always best to spread out one's own faults and failures to the public gaze; but hoping this sketch may prove of use to some inexperienced teacher who may be laboring under the mistake that beset me, I give this brief leaf of my experience in the cause of education. I once taught a country village school of about fifty, of all ages between five and twenty, and of all degrees of knowledge, from A B C's to higher arithmetic and algebra. For two successive winters the school had had male teachers; and the "big boys," of whom there were about half a dozen, had made a great deal of trouble, and had nearly destroyed the school. But I had been urgently solicited to undertake the enterprise, and the boys before referred to promised the trustees that they would behave like gentlemen; so I, full of faith in boys in general, and confident of my powers to manage these in particular, accepted the offer to take the school. A few days before it was to begin, one of the larger girls who was visiting me remarked, "You will have a nice time this winter if Harry Wyatt does not attend; but he is the oldest and the worst boy in school. He was the ring-leader in all manner of mischief last winter." Now, this very Harry was a bright, handsome boy, between eighteen and nineteen years of age; and I had before secretly congratulated myself upon the perfect gentleman that he should develop into under my skillful training. I had always had a strong leaning toward the theory that the native honor and nobility of a boy's character had but to be appealed to in a kind and affectionate manner, to make it bud and blossom as the rose, into all beauty and fragrance. And, as if to confirm this theory, I had, a short time before my school was to commence, read of a teacher who had achieved most wonderful success in governing a school by establishing a *Roll of Honor*, upon which should appear the names of those who during the month should have received no mark for absence, tardiness, imperfect recitations or misconduct. This list was to be hung in a conspicuous place in the room during the next month, and a certificate, stating the fact, was to be given to the successful pupil. I immediately decided this to be just the thing for me. Yes, I would establish a Roll of Honor, upon which, of course, every scholar would strive, with all his might, to have his name inscribed; and thus I might

dismiss every vestige of distrust as to my ability to manage successfully this large and difficult school. The only drawback to the plan was, that I should have so many certificates to write! Well, the first day of school came, and I unfolded my plan to the wondering and delighted scholars, who had never seen things done "on this fashion." For the first two weeks, "all went merry as a marriage bell," and I daily congratulated myself upon having hit upon so fortunate a plan. But as time wore away and the end of the month approached, the older boys (all but two) became rather careless and indifferent in both conduct and lessons. But I was not discouraged; for I said to myself, "The absence of their names from the wonderful roll this month will stimulate them to greater exertions the next." Harry's name did not appear on the roll the first month; and, to my grief and disappointment, I saw, at the beginning of the next, that he not only was not trying to do better, but that he gave unmistakable signs of not intending to do as well, and that he was bent upon preventing the two boys who had succeeded, from going through the next month creditably. At the end of the second month Harry's name did not, of course, appear upon the Roll of Honor, and he was marked lower than before, upon the monthly report of his standing; for I would not stultify my conscience by giving high marks to win his good behavior when he did not deserve them. The next day (the beginning of the third month), Harry came into school, sullen and with a settled expression of defiance that foreboded trouble. What should I do? For Harry was by far the most influential boy in school; and though by many of the other boys he was not especially liked, yet he seemed to have a sort of magnetic influence over most of them. Well, I thought over various methods of reaching him, and I finally conclude! to write him a note and hand it to him privately the next day. And so I wrote a carefully-worded note, in which I told him how great hopes I had had of him—how great had been my disappointment at seeing him take the course he had, etc.; and I ended with an earnest appeal to his honor, his conscience, and his sense of right and truth. "There!" I thought, as I folded the letter, "if there is a spark of manhood about him, this will certainly reach him." The note was given him; and, to my joy, for a few days it seemed to have a restraining influence over him. But just as I was beginning to take courage from his conduct, the very

spirit of mischief seemed to gain complete possession of him, and he returned to his old ways with increased zest; and such was the effect of his sneers about the Roll of Honor, that the rest of the boys positively did not dare to conduct themselves so as to become members of it. And so, at the end of the third month, there appeared upon it only the names of a few of the older girls, who, to do them justice, never swerved from the right. But the fourth month, ah! the fourth month! How shall I describe the daily cross and thorn that Harry was to me? How shall I portray the hourly annoyance of many of the other boys, who, seeing him so careless of his lessons and so heedless of the right, thought it manly to do the same? How shall I express the disappointment and weariness of heart that continually oppressed me, while I as constantly "counterfeited hope on my face"? I will not attempt it; but will simply add in conclusion that, by the time my school closed, I had learned this valuable lesson, that "circumstances alter cases," and that while some teachers in some schools might make a Roll of Honor a valuable help in the government for other teachers to attempt it in a school composed largely of rough, ungentelemanly boys, is most emphatically "casting pearls before swine."

MARY ASHMUN.

CONSERVATION OF FORCES.

"Force is indestructible."—*Joule*.

"There is always hope in a man that actually and earnestly works. In idleness alone is there perpetual despair."—*Carlyle*.

"No one deserves the character of being good who has not spirit enough to be bad."—*Roche foucauld*.

Here are three very suggestive texts upon which I propose to base a brief discourse.

Did it ever occur to you, stern disciplinarian, that you could break a boy's neck more easily than you can break his will? And then, did it ever occur to you that a boy with a broken neck is a better, safer piece of humanity than a boy with a broken will? Hav'n't I heard you say, "I will flog it out of him"? Now let me say, you have no business to be trying to break the boy's will; you can't flog anything out

of him; his will was not given him to be broken; nothing was ever put into him that you can flog out of him. You are ready enough to admit that you cannot furnish a grain of brains or capacity for the boy, and you should be as ready to confess that you cannot take any away from him.

Every child that comes into the school-room is an organism through which force manifests itself *just so much* and no more.

The teacher may do much in directing this force in its operations: he cannot add to it or subtract from it.

What a grand achievement, if he could take even one-half of that force that acts through the boy, the result of which is mischief, and so direct it that it would appear in multiplication-tables learned, and spelling-lessons "made perfect."

What if the boy has a stubborn will? Why, just set it against the greatest common divisor or the least common multiple, and see what a treasure the boy has had bestowed on him.

Suppose your boy is really *vicious*—he swears, cheats, stones innocent cats, and chews tobacco. If you could convert the force he manifests in swearing, into proper emphases in his reading; the ingenuity he exhibits in cheating, into processes for solving difficult problems; the muscular force he puts forth in stoning cats, into removing weeds and brick-bats from the school-yard; the fortitude he exhibits in masticating the filthy weed, into a stoical endurance of the bad odors and unpleasant sights he might encounter in the practical study of comparative anatomy,—why, you would make a *man* of the boy.

The boy, even the bad boy, must do something. Steam is up; the throttle-valve is open; now what are you going to do? You can't "let down the steam," you can't "slow the fire." You cannot abate one jot or tittle of the force that is acting: you can only direct it. The machine is bound to run; but whether on the track or into the ditch depends, somewhat at least, on what you do.

Isn't there such a thing as shutting up the escape-valve? Can't you prevent the boy's doing what you would not have him do, and nothing more. Yes, I think you can, but it is dangerous business. Better let the steam out somewhere to act somehow, than to have the boiler "busted" and the machine ruined. Or, as Lowell has it,

"Far better, almost be at work in sin,
Than in a brute inaction browse and sleep."

The question is not what shall we do with the boy as we would have him, but what shall we do with him as he is.

The greater the manifestation of energy, even though that energy does not always exhibit itself in purely angelic forms, the greater the possibilities of greatness and great goodness.

Innocence is not virtue. Goodness that comes of indolence or impotence, is of the cheapest, weakest, meanest sort.

I once heard a learned, observing Senator say, "I don't like good little boys any more. They don't make men. I do not meet them in the active walks of life. Of all the good little boys I knew in school, not one of them has grown to be a great man. And yet, when in the school they seldom did anything wrong." I asked him if he remembered of any one of them ever *straining* himself to do right? He smiled. He did not mean that good boys could not become great men: that would have been nonsense. He meant that innocence alone will not make men of boys.

Have patience with the bad boys—try to keep them on the track.

J. A. SEWALL.

COMMON SENSE.

I spent a spare hour in the High School at Grand Rapids, Mich., and came away feeling, as did our Teutonic friend, who, recounting his experience at keno, exclaimed, "Py shings! Te more I lives te longer I finds oud. Py golly!"

I stumbled into the basement and found Prof. Strong's class in chemistry deep in the mysteries of nitric acid. Around a long, rough pine table were seated the young amateurs, each with test-tube in hand, note book at elbow, dropping-tube, spirit-lamp, acid, litmus-paper, water, metals and metalloids within easy reach; each intent on seeing what he (she) could find out.

"Well, George, tell me what you have done."

"I put nitric acid on lead. After slightly heating it in the flame of the spirit-lamp, yellowish-red fumes arose, which, by the peculiar pungent odor, I recognize as nitrous acid. Keeping my thumb close over the mouth of the tube and allowing the mixture to cool, I see that

the vapor of water is condensing on the inside of the tube, and that the lead is dissolved."

"Very well done. Can you give me the reaction?"

"Yes, sir! The nitric acid parts with its water, which is deposited on the inside of the tube. A portion of the NO^5 parts with some of its oxygen, leaving NO^3 , which was the nitrous acid I saw arising in the dense fumes. The liberated oxygen unites with the lead, forming lead oxide. The remainder of the NO^5 unites with the lead oxide, forming lead nitrate."

The class having examined George's tube, smelled his perfumery, and listened to his story, make a note of his discovery, and then each in turn continues the exercise, having in the meantime performed some experiment which has shown the action of the acid on some other substance. Having learned the dealings of nitric acid with copper, cobalt, lead, lamp-black, &c., the pupils are made by the Professor to generalize their work, and are then dismissed with all the notes, experiments, *drawings*, &c., necessary to reproduce the work and fasten it in the memory.

Further conversation with Profs. Story and Daniels (the Supt.) brought out three additional facts. Last fall, instead of using \$300, offered by the school board, in purchasing entirely new apparatus which the pupils could not use and the Professor hardly dared to, he spent about \$80 in chemicals, test-tubes and other apparatus which the pupils could use, and which if broken would injure no one in purse or in temper. The pupils, these innovators claim, are much more interested than they would be in seeing an expert perform all the wonderful experiments that form the chief stock in trade of the text-books.

Now, in the name of all the old fogies in Michigan, I protest against such nonsense. Such ignoring of all our time-honored customs in this matter deserves severe reprobation. It is not to be tolerated. It savors altogether too much of new-fangled notions to suit us. This is not the way we were taught. With every right thinking O. F., that is enough to condemn it, to say nothing of the inevitable ruin it entails on all manufacturers of costly chemical apparatus, if such theories and practices prevail.

But to all who are really struggling to accomplish something on common sense principles, this scene comes with a gleam of hope.

These pupils are learning something. What they learn they retain. They get results in a tangible shape. Does any one think these pupils will ever forget the taste, the smell, or the looks or actions of nitric acid and its compounds, after such a lesson? Again, they are learning the grand lesson that the facts of physics are not matters of *opinion*.

The columns of the New York city press have been crowded the past winter, with discussions as to whether super-heated steam would cause conflagration. Hoping to settle the question, the irrepressible reporter interviewed that right royal investigator, John Tyndall, believing his opinion would close the controversy. The answer was worthy the man. "Why don't they try it?" There is the key-stone. That is the Baconian philosophy boiled down to a single sentence—"Try it."

One word more. Here is a hint to hundreds of teachers throughout the West, who are deterred from opening up to their pupils the educational advantages of the sciences, fearing the supposed enormous cost of the necessary apparatus. A question of simple proportion settles the difficulty. Eighty dollars supplies the one hundred pupils of the Grand Rapids High School for one year. One-tenth the amount would probably be sufficient for ordinary schools, and yet double this latter is within the reach of nearly all.

By the way, there is a list of apparatus and chemicals in the Science Primer on Chemistry, that is practicable and within the reach of almost every teacher, and fully one-half of that apparatus can be manufactured by a teacher of ordinary *gumption*. We are firm believers in home productions in this respect. This latter is also not a matter of opinion, but experiment. "Try it!"

MICHIGAN.

WORKING PLANS OF SCHOOLS.

Teachers often secure for themselves a great deal of professional help by thorough visitation of well-ordered schools. A mere passing call, or a pleasant chat with a fellow teacher while school work is suspended, gives very little of permanent value. A careful visitor wishes to carry away with him the working plan of the school; the methods of teaching, the forms observed in calling and dismissing classes, the

methods of recitation, the rules of order, the record system, the plan of conducting examinations, the general exercises, the oral and physical training ; in short, to note whatever gives the school any character or individuality. If he sees good results produced, he is particularly anxious to know on what the success obtained depends ; if failure is found anywhere, to see whence it comes. Such careful visiting may require time and money, but often both are well expended. No money could purchase from me, nor for me, such information as I have obtained by visiting excellent schools, and studying their minutiae no less attentively than their general routine.

One thing should be observed in selecting schools to visit. Let those be chosen whose circumstances are somewhat similar to your own ; schools which have similar grades, and are situated in towns neither much larger nor much smaller than your own ; where the working conditions are something like your own. The school work of great cities is always done under conditions, both favorable and unfavorable, which do not exist elsewhere. But, unfortunately, it is very difficult for regular teachers to spend much time in thorough school visiting. Our school terms and vacations nearly coincide. If one of us begins a week earlier or ends a week later than his neighbors, he cannot find their schools in average working condition, either at the beginning nor at the end of the school year. In our own term time, it is next to impossible to get away.

Considering these difficulties, the question occurs whether a printed sketch of our school-room work cannot be presented in these columns, in such shape that our methods of work can be understood and imparted for mutual benefit and interest. Probable we agree far better as to what to teach, than upon methods of teaching. Each teacher has his own way of teaching certain subjects. Each has some way of labor-saving, of dispensing with the drudgery which is so exhausting and unprofitable, that the diminishing of it in every way is worthy of anxious thought. Each, perhaps, has some way of work, which in his hands produces excellent results, and which may do us all good if we know it. Speak out, brethren and sisters, if you will, and give us a sort of "experience meeting."

We have had theories enough on education to last us one decade, if not a single line more is penned upon any one of them. Probably

we are all realizing that our work is a long way behind our own ideal of it. If we learn how to do more, we can afford to theorize less. Come, fellow teachers, tell us how you do your work. No untried theories, if you please; no keeping back of failures, but the history of your school work, with as much minuteness as Boswell used, provided you are as faithful to set down everything.

V. S. D.

MATHEMATICAL.

$$(1.) \quad (a + b)^2 = a^2 + 2ab + b^2.$$

$$(2.) \quad (a - b)^2 = a^2 - 2ab + b^2.$$

Subtract (2) from (1).

$$(a + b)^2 - (a - b)^2 = 4ab.$$

Put $a = 25$ and $b = 1$. Then, $a + b = 26$ and $a - b = 24$.
 $\therefore 26^2 - 24^2 = 4ab$, or 100.

Similarly, put $b = 2$, and $27^2 - 23^2 = 200$, etc.

Hence, to find the square of any number between 25 and 50, *Take the excess of the given number above 25 as hundreds, and augment by the square of the difference between that excess and 25*, or, which is obviously the same thing, *by the square of the difference between the given number and 50*. Thus:

$$43^2 = (43 - 25) 100 + (25 - 18)^2;$$

$$\text{or, } 43^2 = 1849,$$

$$\text{and } 47^2 = 2209, \text{ etc.}$$

Again, put $a = 50$ and $b = 1$. Then, $a + b = 51$, and $a - b$,
 49. $\therefore 51^2 - 49^2 = 4ab$, or 200.

Put $b = 2$, and $52^2 - 48^2 = 400$.

Hence, to find the square of any number between 50 and 100, *Take twice the excess of the number above 50 as hundreds, and augment by the square of the difference between that excess and fifty*, or, *by the square of the difference between the given number and 100*. Thus:

$$89^2 = 2(89 - 50) 100 + (50 - 39)^2;$$

$$\text{or, } 89^2 = 7921,$$

$$\text{and } 91^2 = 8281, \text{ etc.}$$

Again, put $a = 250$, and $b = 1$. Then, $251^2 - 249^2 = 1000$.

Put $b = 2$, and $252^2 - 248^2 = 2000$, etc.

Hence, to find the square of any number between 250 and 500, *Take the excess of the number above 250 as thousands, and augment by the square of the difference between this excess and 250, or, by the square of the difference between the given number and 500.*

Thus:

$$487^2 = (487 - 250) 1000 + 13^2 :$$

$$\text{or. } 487^2 = 237169,$$

$$479^2 = 229441,$$

$$493^2 = 243049,$$

By giving a new value, as 75, 100, 1000, 2500, etc., etc., this *amusement* may be indefinitely increased. Memorizing the squares of the numbers from 1 to 25 inclusive, gives a foundation for any subsequent work in this direction. I doubt not that teachers will find a little attention to the application of the principle here illustrated, of considerable benefit in connection with the solution of quadratic equations, as also in other cases when the properties of squares are specially under discussion.

O. S. WESTCOTT.

Chicago, 1873.

THE MOUNTED SQUADRON.

Another distinct body is to be seen in the ranks of the attacking forces. These are *mounted* men, all of them. The animals which they bestride differ greatly in size, color, equipments and speed—a very picturesque and motley squadron—but certain striking characteristics betray the common origin of all. They are but different species of the same genus—the genus *Hobby*. The appearance these mounted cohorts when deployed in line of battle, in front of the serried hosts of the common school army, is striking. Each trooper flies a pennon of different shape and color, and inscribed with a different legend. It is difficult to decipher them, amid the plunging and cavorting of the rampant steeds, goaded by the savage roweling of the impetuous riders. But here and there, as the banners stream out in the upper air and flash in the sunlight, the following slogans, among others, become legible: “Moral suasion only”—“Spare the rod, and spoil the child”—“Object lessons”—“No new fangled notions”—“Grammar is the principal thing”—“Reading, writing

and arithmetic, the true common-school trinity"—"Out with geography; in with history"—"The word-method forever"—"The good old ways"—Pestalozzi is King"—"Teach without text-books"—"Oral teaching is a humbug"—"Kindergartens, and then the millenium"—"Music and drawing at all hazards"—"The common English branches are enough"—"Out with the Bible; no priestcraft"—"Moral instruction, or abolish the system"—"The practical only"—"Mental discipline"—"No high schools"—"Public high schools, the people's colleges"—"An American education for Americans"—"German and French, by all means"—"The synthetic method"—"The analytic method"—"The inductive method"—"Analysis, synthesis and induction, now and forever, one and inseparable"—*Etc., etc.*

It will be seen that these assaulting parties are as hostile to each other as to the schools and school systems themselves, the only bond of union consisting in the fact that each trooper levels his lance against some one point of the common school line, while no two of them agree in assailing precisely the same point. They are all specialists and hobbyists, and hence their strictures are without much force or significance in the estimation of persons of thoughtful and well-balanced minds.

The elements of opposition coalesce in divers other forms, under the power of various affinities, motives and purposes, prominent among which are those of an illiberal, unintelligent and selfish character. Thus, the hard and miserly join hands to break down a system which extorts taxes from their broad acres and hoarded wealth; the childless unite in objecting to assist in educating the children of others; those who schooled their children under the old regime, would like to know why their present neighbors should not also pay their own tuition bills; those who have grown rich and great without any education to speak of, do not see why their children and their neighbors' children should not be left to do the same; some are not able to reconcile the doctrine of free schools by State law, with their notions of personal liberty, free government and the Declaration of Independence; others, of aristocratic pretensions, affect to question the wisdom and to deny the obligation of educating the masses, alleging that even if labor and learning are not incompatible, ignorance is at least the normal and happier condition of the laboring classes; nor are there wanting those who flatly deny that intelligence promotes virtue and thrift, and lessens profligacy and crime, and who therefore denounce public schools in the name of religion and political economy. These, and many other classes and affiliations of persons, added to a species of moral wasps to be found in the social atmosphere of nearly every community, whose nature it seems to be to buzz and sting, keep a very lively skirmishing along the outposts of the common-school army, never permitting the sentinels to sleep at their posts. And it is well.

But the public schools are arraigned by men who belong to none of these classes of theorists, abstractionists, misers, aristocrats and chronic fault-finders; by men who are actuated by none but the worthiest motives, and who have no personal or selfish ends to subserve. There are allegations in inefficiency and failure which, if true, affect not merely the form but the substance of the school system. An army may be indifferent to the driving in of its distant outposts, but an assault in force upon its intrenched camp, is another matter. A tree may be marred by too free or careless a lopping off of its outer branches, but when the axe is laid at the root, its life is imperilled. The public schools do stand arraigned at the bar of public opinion, upon charges of a very serious nature, preferred by persons whose opinions and statements are entitled to thoughtful consideration. It is therefore proposed, in the interest of free schools, upon whose character so much depends, and in the spirit of candor and truth, to examine some of these witnesses, to note the nature and essence of their testimony, and consider the indictment founded thereon.—*Supt. Bateman's Report for 1872.*

TACT IN TEACHING.

No accomplishments, literary attainments, or moral worth, can insure success in education without that tact which will enable the teacher to comprehend the characters of her pupils, to gain their affection, and to control and influence their prejudices and prepossessions. This is not the work of a day or a month; indeed, those teachers who ultimately gain the greatest ascendancy over their pupils may, for a time seem to have made little progress towards this end, while more superficial persons, by assuming at first an appearance of great softness of manner, by caressing and patting the little dears, may be admired as *very lovely, very amiable teachers*. But young persons are not slow in detecting any attempt at deception; they soon learn to consider this fondness as a sort of mannerism assumed only for effect; and whenever they get such an impression, they give those who have charge of them little credit for any sincerity. A person of good judgment will not, then, begin with her pupils by flattery or caresses; she will endeavor to define their duties with precision, and will seek, at first, to inspire respect rather than love; knowing that the former once secured, the latter will easily follow.—*From "The Student," a volume of the "Teacher's Library."*

EDITORS' DEPARTMENT.

The Illinois Normal School has just passed triumphantly through a struggle that threatened, for a time, to be somewhat serious. When the bill appropriating supplies for the next two years came up in the legislature, it met with a quite determined opposition. The times are hard, money is scarce, the legislature were disposed to be economical, and to scrutinize very carefully every item of expense. Some opposed the bill on principle, declaring their belief that there is no call for the State to educate young people for teachers more than for ministers, doctors, etc. Those who raised this point did not seem to be aware that it had been answered a hundred times in the last twenty years,—that it is a sufficient answer to say that the State does not pretend to give its people their theology or their medicine; but, as it does give them school instruction, it has a special duty to aid in fitting men and women to impart this instruction.

Objections were made to the Institution itself, some of which were ridiculous and absurd enough. It was charged that the pupils of the school do not teach; but reports from the county superintendents, in response to circulars from Dr. Bateman, showed that in seventy-two counties of the State, no less than about seven hundred pupils of the school are *now* engaged in teaching. It was charged that the pupils of the Normal are mostly children of rich men, and that the tendency of the school is to favor the *aristocracy*. People acquainted with the pupils of the Institution will laugh at this charge, and it is sufficiently laughable. It was answered by showing that one-third of the pupils the last term *boarded themselves*, to save expenses. Objections were made on other points equally reasonable, and equally easy to answer. It was clearly shown that there is good reason for Normal Schools; that no school of the kind in the country is better manned or is doing better work, than the school at Normal. In the committees, and before both houses, the Institution found able defenders; none more able than Senator Charles B. Steele, of Coles; and, when the bill came to its final passage, it received only two opposing votes in the Senate. [As we write, the bill is on its third reading in the House.] Not a dollar was denied of all that was asked. Thus, the Normal has been tested again, and has come out of the trial so triumphant that its friends may well rejoice.

The prospects of the Institution were never so good as to-day. With ample funds for current expenses, for its library and museum, with an able, experienced and harmonious Faculty, with a largely increased attendance at this term just opened, with slanders refuted and its enemies vanquished, it starts off on a career, its friends may well hope, more bright than any in its past history. It is a little curious to notice how the enemies of Normal Schools,—generally made

so by ignorance or prejudice,—discover every little while that they are good for nothing, and set themselves, with the zeal and wisdom of Mrs. Partington, to abolish them. And yet the number of the State Normal Schools rapidly increases; almost every Northern State has one or more, and there are several in the Southern States. Only two Northern States that have ever established such a school have given them up; and, in both those States, they have been re-established, stronger than before. Doubtless, our Normal Schools are not perfect, but they are doing a work in education that cannot be valued, and the people only need to know their work to sustain them, with enthusiasm.

A writer in the *Madisonensis* makes an able plea against the too important place of the classics in the college curriculum; his article is calm, temperate and logical; he claims for Scientific study a more general recognition, both for its practical benefits and for its value in intellectual training. We give the closing words of the article, believing it will do our readers good to ponder them.

“One fact which seems to weigh heavily, though perhaps unconsciously, against the introduction of a scientific course, is the character of the men who advocate it. Many of these are restless agitators opposing the classical system, principally because of the toil and labor it imposes. These will be but frothy bubbles everywhere, broken by the slightest pressure. No system can secure success without that incessant work which is the dominant law of the universe, from the Creator to the tiniest of His creatures that creep upon this little earth. Many also of the opponents of the classics are avowed enemies and scoffers of religion. But is this a reason for the friends of religion to settle back in alarmed conservatism and refuse to meet the issues of the times? Rather the reverse. All the exigencies of the age loudly summon educated christians forth from their antiquated halls to grapple with the questions of the present. Shall Darwin, Huxley, and Tyndall send abroad their audacious challenges and there be none to accept? Then let us have an education that shall not ignore the developments of the present nor shut out the past, but which, inclusive of all, shall ably equip the young man of the present to do battle with the fallacies of the age.”

Prof. Agassiz is giving a series of lectures at the Museum of Comparative Zoology, in Boston; these lectures are a part of the university course of lectures, and are free. We hope Prof. Agassiz will be able to appear as a lecturer more frequently than he has done for the last fifteen years; his ripe scholarship and scientific knowledge give to what he may say the greatest value, while his skill in imparting knowledge in the lecture-room is something quite wonderful.

The meeting of the Illinois Society of School Principals will be held at Ottawa, on the 8th, 9th and 10th, of July. Arrangements are in progress to insure a successful meeting. The subjects discussed will be of a nature to interest all teachers, but especially those who have to perform the duties of principals or superintendents. Papers will be presented on, “Departmental Instruction,” “Natural Science in the Public

School," "Latin in the High School," "Duties of Teachers outside of the School," and on several other subjects. We shall give the order of exercises in full, in our next issue. These meetings have proved to be among the most interesting and profitable educational gatherings held in the State, and we hope to see a full attendance at Ottawa.

Below is a specimen of orthography and geography at a recent examination for admission to Bowdoin College. The written papers on Geography contained the following: "Nare ganset," "Pernobscot," "Florady," "Mississuri," "Iterly." The Catskill Mountains were credited by one writer to Vermont; by another to Pennsylvania. The Alps to Asia by a third. Berlin was set down as the capital of Spain; Geneva was transferred to Italy. The Rhine was said to flow into the Atlantic, the Danube into the Baltic.

The above paragraph is going the rounds of the papers; not long since, some specimens of orthography equally creditable were reported from the University of Michigan. We have no doubt that every college, high-school and normal school in the country might report something of the same kind from its examination papers. Our common schools need to do common-school work better; until they do, our higher institutions will be shamed and degraded in just this way.

We have received several solutions to the *second* problem in the April number, one of which we here give. Why will not our friends pay their respects to the first one, also? We have no answer to that, as yet, except from the proposer.

Solution.— $\frac{1}{5}$ the cost of the dish minus the cost of the cover equals the cost of the cover; hence, $\frac{6}{5}$ the cost of the dish equals twice the cost of the cover; or the cost of the cover is $\frac{2}{3}$ the cost of the dish. Hence, the whole cost, 24 dimes, is $\frac{8}{3}$ the cost of the dish. From this, we learn that the cost of the dish is 15 dimes; and of the cover, is 9 dimes.

This solution, in substance, is given by M. P. A., of Macomb, A. B. A. of Stark county, A. V. of Franklin, and D. A. T.

We have a very neat geometrical problem that we intend to propose soon, if there seems to be much interest in such work, shown on the part of our correspondents.

We like to receive problems, queries, and items of news from our friends,—send them on.

EDUCATIONAL INTELLIGENCE.

The following, from the New York Journal, is exactly what the SCHOOLMASTER wishes to say:

"We desire to make a specialty of State news; and, to be successful in this, it is only necessary that each of our subscribers should take pains to inform us of whatever is of interest, educationally, in his own vicinity. We shall be obliged to depend largely upon our subscribers for local information, and would thank any one to favor us with news as above mentioned. Any change in school principals, within the State or between this and other States, improvements in town or city school buildings, meetings of teachers' associations or institutes, movements of prominent educational men, and other items of like character, will be gladly noticed."

CHICAGO.—Hundreds of the readers of the SCHOOLMASTER visit Chicago every year. A large majority of them, probably all, have business with book-houses or with book-agents. The fire caused the dispersing of these parties; some took up their abode on the South side, some on the West side, while still others have until now had no abiding habitation. Most of these friends have now returned to the old stamping ground. We believe we shall do our readers a favor by informing them what we know about the *post* fire locations of our friends. It is now possible to visit Chicago and, as in former times, see, in one day, the representatives of nearly every book-publishing house whose wares are scattered throughout the school districts of Illinois. Should one stop at Anderson's European hotel, on Madison street, and we know of none better suited to the wants of pedagogues, for in price and style the Anderson Brothers can accommodate any purse, furnishing rooms at from \$1 to \$8 a day, and meals at from 25c. to—well, infinity, he is but two minutes walk from the corner of State and Madison.

North of Madison on the east side of State, near this corner, in one of the magnificent buildings of which new Chicago justly boasts, are the large book stores of W. B. Keen and Cooke & Co., and Jansen, McClurg & Co. Passing through the salesroom of the former, 113 and 115 State, to the east end, one finds in a comfortable and elegant office the representative of the Boston house of Brewer & Tileston—O. S. Westcott is his name. Should Mr. Westcott be out, his clerk [ess] will give the caller attention, and kindly answer all questions except the one "*where* is Mr. W.?" It is futile to use one's time in trying to find the whereabouts of one of these gentlemen when he is absent from Chicago. Adjoining the office of B. & T. is that of Sheldon & Company, represented by Mr. S. S. Ventres. Mr. V. is situated much like Mr W., except no little lady waits, in his absence, to welcome strangers.

Above W. B. Keen and Cooke is the establishment of A. S. Barnes & Co. The Chicago office of this great house is more than an office; it is a vast store, well filled with books and school furniture—the wares of this firm. It occupies four floors; the rooms are fifty by one hundred feet. The first floor is elegantly furnished and fitted for office purposes; the second is filled with book stock and apparatus; the third contains

school furniture; the fourth is used for storage. Twenty-five men constitute the working force of the establishment. The whole is in charge of the younger Mr. Barnes of the firm. One meets with a kind reception and welcome here.

The store next south is the finest book-store in Chicago or in the West—that of Jansen, McClurg & Co. Of the salesroom and its appointments, we cannot speak, having neither time nor space to do justice. Everything, that can be wanted, is here, and schoolmasters are especially welcome at all times. Upon these shelves we find, in addition to the standard literature of ancient times, in various editions and bindings, all of the great works which mark the progress of events, the histories of nations and of civilization, of war and peace—the growth of the religious sentiment, and the creation, rise and fall of a million theological theories. Here is almost everything valuable in universal history, from Genesis to Froude and Rawlinson, in every variety of type and binding, the ranks being constantly reinforced with the freshest issues from the press of the world. Every book of general value published in the English tongue, and not a few in the German and French, find their way to this house as fast as steam can bring them to Chicago. But the proprietors are not satisfied with a single edition of a standard work. Of the eminently popular favorites like Dickens and Scott, they have some twenty-five editions of each, and of other popular authors in proportion; and these not the cheapest alone, but the finest issues of the most noted publishers. In the east end of this store are the offices of Harper & Bros., and D. Appleton & Co. The former is represented by Mr. A. Ethridge, whom many remember as one of the ablest county superintendents of Illinois and who takes charge of the introduction of the books of his firm in Illinois and Iowa, and by Mr. W. J. Button, agent for Michigan, Wisconsin and northern Indiana. The clerical force here is quite formidable; the visitor will be sure to find some one at home. The agent of Appleton & Co., Mr. P. B. Hulse, has been with that house four years. The “latch string” is always out on his door. His hearty welcome is reward for calling. The results of Mr. H.’s work are very apparent in our State.

Leaving 117 and 119 State and passing south across Madison, the first door is 133 and 135, the Chicago home of Ivison, Blakeman, Taylor & Co., represented by Mr. Edward Cook, assisted by a force of nine men. It will be remembered that before the fire Mr. Cook was at 133 and 135. He can now be found at the same spot. The room is the same size as before, the arrangement of office, stock, etc., similar, except that more space has been set apart for the accommodation of teachers and friends who call. A file of all western school journals is kept ready for reference, and complete sets of back volumes of most can be found.

Directly opposite, on the west side of State, No. 136, is the book store of Hadley Brothers. The senior member of the firm, Hiram Hadley, is well known among school men. This young firm, having started four years ago at 41 Madison, is growing in business with a vigor that is parallel to the growth of the city. It is the north-western agency for the publications of Scribner, Armstrong & Co. Messrs. O. S. Cook and Thomas Charles represent the school-book interest, and have their offices here. The business of Hadley Brothers requires the services of fourteen men. The stock is complete, and orders for goods in their line are promptly filled. Good prophets tell of a glorious future for Hiram and Seth. We found the following posted in their store. Thinking it good for general application, we have preserved it: * *

During Business Hours.—Quiet industry is found in every well-regulated establishment. Boisterous speaking is unnecessary and impolite. Joking, laughing, telling stories, and whistling, consumes time which belongs to others, and can never be replaced.

Minutes are precious and should not be squandered. By steady toil, the tortoise outran the hare. One hour of earnest labor, is worth two of indifferent application.

It is idle to parley about small matters.

Prompt decision is as necessary as rapid execution.

How long did it take Gen. Sheridan to decide to go to his routed army? Having decided, when did he start? Having started, how did he go?

"Whatsoever thy hand findeth to do, do with thy might."

Now pass south one block to the corner of State and Monroe, and look and admire the magnificent structure of A. H. Andrews & Co. Go up and visit his warerooms and offices. Then surely one will know that whatever can be ordered in the school or office furnishing line can be had here.

The Chicago home of Cowperthwait & Co. is still further south, on Wabash avenue, No. 335. Mr. F. S. Belden is the agent. He is especially glad to see his friends, and treats them accordingly. Mr. W. M. Scribner, of Woolworth, Ainsworth & Co., is in the same building.

Col. E. B. Gray and Mr. M. R. Keegan, for J. H. Butler & Co., have engaged one of the new stores under Palmer's new hotel. They will be in the new quarters about June 1st. Geo. Sherwood & Co. will be found after May 1st, in Lakeside Building, corner of Clark and Adams streets.

MINNESOTA.—The Academy of Natural Sciences at St. Paul, held its "opening exercises" on the evening of Feb. 24th. Speeches were made by Prof. Winchell, of the State University, Prof. Phelps of the Winona Normal School, Mr. O. S. Westcott of Chicago, and Gov. Austin.

OREGON.—We make the following extract from a private letter just received from an old Illinoian, now in Forest City:—

"Our new school law, though still very imperfect, is nevertheless a great advance upon what we had before. S. C. Simpson, a graduate of Willamette University, a man of excellent scholarship and high ability as a statistician, has been appointed State Superintendent, and is earnestly at work. He is taking a course to secure the active co-operation of the teachers of the State; and so we hope for a rapid improvement in our public-school system.

"We have had a remarkably mild and open winter, even for Oregon; but just now, March 5, we are having the worst rain storm I have witnessed in the State. However, everybody goes out as usual, some with umbrellas, some with cloaks, and others with no extra clothing. We are so used to rain in the *winter* here, that when a dry, clear spell occurs, we all take cold. Rain is as natural in winter in this valley, as a fish is in water."

From Prof. A. J. Anderson, formerly of Lexington, Ill., now of Forest City, Oregon, we receive a report of the public schools of that county, of which he is Superintendent. Forty-three districts are reported; whole number of pupils, 1897; average attendance, 809; total yearly cost of the schools, \$7,439.08; highest salary \$70 per month; lowest, \$20. per month. The principal text-books in use are Sanders' Readers and Spellers, Monteith's Geographies, Thompson's Arithmetics, and Pinneo's Grammars. Many are using Willson's Readers. The Pacific University is located at Forest Grove; it enrolled twenty-four members last year. In the Academy, connected with it, there were about 130 students. The chief text-books in the Academy, are the Analytical Readers, Guyot's Geographies, Robinson's Arithmetics, Stoddard's Mental Arithmetics and Greene's Grammars.

REPORT OF ATTENDANCE FOR MARCH, 1873.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
Evansville, Ind.,.....	4,260	20	3,486	3,202	91-2	1,246	2,161	Alex. M. Gow.
Terre Haute, Ind.....	2,443	20	2,267	2,671	91	1,004	522	Wm. H. Wiley.
West and South Rockford, Ill., }	1,095	20	1,037	953	91	238	300	{ J. H. Blodgett. O. F. Barbour.
Darville, Ill.....	1,043	25	928	811	87-4	424	184	J. G. Shedd.
Alton, Ill.....	969	20	849	812	95-6	276	361	E. A. Haight.
Macomb, Ill.....	619	20	572	548	95-8	40	307	Matthew Andrews.
East Denver, Colorado.	608	19	547	489	89	897	131	F. C. Garbutt.
Princeton, Ill.....	600	20	534	497	94-1	87	164	C. P. Snow.
Marshalltown, Iowa....	601	20	564	541	99	58	38	Chas. Robinson.
Cedar Falls, Iowa.....	592	10	560	513	92-6	249	225	J. K. Sweeney.
Shelbyville, Ill.....	530	20	503	439	87	144	139	Jephthah Hobbs.
Polo, Ill.....	522	15	449	415	92-5	14	233	J. H. Freeman.
Chas. City, Iowa.....	473	20	450	404	89-7	507	96	Irwin S. Shepard.
Winchester, Ill.....	424	20	313	274	87-2	345	.....	Henry Higgins.
Edwardsville, Ill.....	424	20	323	294	92	13	140	H. H. Koebler.
Marengo, Iowa.....	399	20	365	341	93-4	41	151	C. P. Rogers.
Sauwisch, Ill.....	388	18	319	321	92-6	22	138	Harry Moore.
East Mendota, Ill.....	386	20	351	323	92	65	120	J. R. McGregor.
Mattoon, West Side, Ill.	363	22	314	296	94-1	.....	51	W. H. Lanning.
Rochelle, Ill.....	356	20	337	325	96-4	18	175	P. R. Walker.
Normal, Ill.....	338	20	312	285	91	76	71	Aaron Gove.
Albia, Iowa.....	330	15	817	304	95-9	21	153	Cyrus Cook.
Lexington, Ill.....	277	21	252	241	92-5	341	45	Daniel J. Poor.
Belvidere, Ill.....	272	15	271	257	94-6	21	182	H. J. Sherrill.
DeKalb, Ill.....	258	16	229	201	87	90	55	Etta S. Dunbar.
Toledo, Iowa.....	255	20	219	196	89-4	398	28	A. H. Sterrett.
Escanaba, Mich.....	245	20	224	214	95	51	73	N. E. Leach.
Sheffield, Ill.....	240	20	222	201	91-3	52	80	J. A. Mercer.
Martinsville, Ill.....	253	20	162	151	93	64	31	C. M. Johnson.
Altona, Ill.....	210	22	203	175	86-2	178	101	J. H. Stickney.
Yates City.....	209	16	164	154	94	119	.....	A. C. Bloomer.
Maroa, Ill.....	195	22	164	148	90-5	110	44	Jas. Kirk.
Lyndon, Ill.....	141	21	131	111	85	36	29	O. M. Cary.
Ridott, Ill.....	101	20	86	74	92-5	24	27	C. W. Moore.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

MICHIGAN.—The University of Michigan graduated its classes in the medical and law departments, on the 26th of March. Eighty-five,—twelve ladies—graduated in medicine; one hundred and twenty-three graduated in law. The *Inter Ocean* says that two of the law-graduates were of the "opposite sex": Query, What were they opposed to?

MISSOURI.—Prof. E. B. Neely has been re-elected Superintendent of Schools in St. Joseph, Mo. He has held the office nine years.

INDIANA.—Fort Wayne has \$178,000 worth of school property. She has ten district schools, one high school, and a training school, and paid last year for tuition \$26,878.39.

The dedicatory exercises of the new high-school building in Michigan City were held March 20. A large and appreciative audience assembled at the high-school room at 2 p. m., and listened to addresses by Capt. H. A. Ford, of Niles, Mich.; Hiram Hadley, Esq., of Chicago; D. J. Baldwin, Esq., and others of our citizens. The exercises were interspersed with music kindly furnished by a quintet of our best singers.

The completion of a school building so elegant and commodious has given a lively impetus to the cause of education in this part of the State.

The Normal School at Terre Haute graduated a class of six, four ladies and two gentlemen, on the 18th of March. The *Journal* notices very favorably the exercises of the occasion.

A. W. Jones, Superintendent of the Vincennes Schools, died recently; he had held the office for several years. Mr. Jones, himself a Catholic, and in a community where many Catholics looked unfavorably on free schools, was their staunch friend and supporter.

The Legislature has made several changes in the school laws the past session. County Superintendents are to be chosen in June next, and every two years thereafter. They are to examine teachers, to visit each school in the county at least once a year, to meet with, and preside at, a township institute in each township at least once a year, and to have the general oversight of the schools of the county. The pay is fixed at four dollars for each day of actual service; and the Superintendent must not act as agent for the sale of books and school apparatus. Text books are selected by a County Board of Education; but books once adopted cannot be changed for three years thereafter, except by unanimous vote of all the members of the Board. The annual appropriation for the Normal School is increased from \$10,000 to \$15,000, with \$2,000 additional for contingent expenses. The State University is to receive \$15,000 additional appropriation. The rate for the Special School Tax is doubled. The salary of the State Superintendent is increased, although it is now only \$2,000! Aliens and unmarried women who pay taxes are allowed to vote at school meetings. On the whole, the changes put school matters on a much better footing in the "Hoosier State."

MASSACHUSETTS.—Henry C. Bullard, late sub-master in the Quincy school, Boston, died at Jamaica Plain, on February 21st. He had been in failing health some time. "I knew him, Horatio."

Miss Julia A. Valentine, also a teacher in the Quincy school, and daughter of Charles E. Valentine, late master of the school, died very recently.

Mr. Marshall Conant, former Principal of the Bridgewater Normal School, died in Bridgewater in February. Mr. Conant was a native of Vermont; in his youth he was in feeble health, and he acquired his education under great difficulties; but, by strength of will, and judicious care, his very useful life was prolonged to more than seventy years. He was principal of the Academy at Hillsboro', Illinois, some thirty years ago. After his return to New England, he spent several years as a civil engineer. In 1853, on the resignation of Nicholas Tillinghast, he became Principal of the Bridgewater State Normal School, a position that he filled with eminent success for about seven years, until failing health obliged him to retire. For the last ten years of his life he filled a most responsible position in the Internal Revenue Department at Washington. Last summer he left Washington and came to Bridgewater for rest, expecting to return in the Fall; but his health continued to fail, and he passed his last days amid the scenes of his most useful years. Few men ever brought to the teacher's work more genuine enthusiasm than he; and hundreds of teachers whom he has trained will remember his beaming eye and earnest words, as the trials of school-work tend to cast them down, and will catch inspiration from the memory. He was not distinguished as a teacher

only : he was a mathematician and inventor of rare ability. But, best of all, he was a Christian gentleman, of incorruptible honesty, great kindness of heart, and of a most loving, buoyant and cheerful spirit.

"None knew thee but to love thee,
None named thee but to praise."

And to all that knew him it will be a joy to remember him.

ILLINOIS.—The *Morris Herald and Advertiser* says :

It is a matter of local pride to us that the reputation of Prof. Dougherty's Classic Institute is such that pupils of the Institute are in demand in this and adjoining counties, for public-school teachers, and that a diploma from the Institute is the best recommendation a young man or woman desiring to teach school can present to school officers.

Carroll County.—Supt. J. E. Millard is holding local institutes in different parts of the county ; such a meeting was held at Argo, on Saturday, March 8th. The attendance of teachers and citizens was large ; exercises in school studies occupied the day, and the Superintendent gave a lecture in the evening. The Institute discussed the following *Resolution*, "That the inefficiency of our schools is due more to the teacher than to the patron." We think something might be said on both sides of that question.

Peoria County.—The following plan for teachers' meetings during the pleasant days of summer, is respectfully suggested for the consideration of yourself and your readers.

To hold the meeting at some point in the country where opportunity can be had to study natural history in its various departments.

To assemble in the morning at the school-house, where those present will separate themselves into groups under the leadership of persons previously selected, for the purpose of spending the forenoon in the practical study of such subjects as may seem desirable. If the neighborhood possesses geologic interest, some person familiar with the locality can be found who will be a guide to desirable points. So with other studies.

At noon the different parties are to return to the school-house to partake of lunch, with which each one has come provided, and to spend an hour in a social way.

For the afternoon, the exercises should be of a more formal character, in accordance with a previously arranged programme. A portion of the exercises should consist of brief reports (say twenty minutes each) from the leaders of the different parties of the morning, upon subjects of interest noticed in the ramble. These reports should be for the especial purpose of conveying instruction upon their respective subjects, and should be followed by short discussions, questions and answers.

Room should be made in the programme for a short historical sketch of the neighborhood, especially of its educational growth, by some one of the early settlers.

Other exercises, as essays, addresses, discussions, etc., can be provided whenever it is thought desirable.

The good results of such a plan of operations seem, in theory at least, quite numerous. The opportunity it affords for instruction, for gathering a store of facts for future use in the school-room, will suggest itself to every teacher. Inasmuch as its social feature serves to cultivate acquaintance and sympathy among teachers, it too has a direct educational influence.

But as this kind of meeting may be conducted so as to bring teachers and people together, and to interest the latter more thoroughly in the former and their work, it is

especially worthy of commendation. Of late, there has been an evident dissatisfaction with prevailing methods of education. Commencing, a few years ago, with a severe criticism of the courses of study in the universities, it has since turned to other institutions, until at length it has attacked the common school, with a spirit of animosity that would deprive it of its peculiar power of preparing the American people for the duties of citizenship. The causes of this disaffection are numerous, and it becomes the friends of the common school to study them diligently, and contrive means to remove them.

Now, it is suggested that one cause of this disaffection toward our school system is a lack of community of feeling and of co-operation between the two parties in the educational work. Each party considers itself too independent of the other, even if there is not hostility between them. Parents are ready to criticise the acts and motives of teachers, while teachers do not fully appreciate the fact, that in the prosecution of their work, home influences must be continually borne in mind.

Any agency which tends to bring teachers and parents together, and secure a mutual understanding, and co-operation in the work of both, is calculated to produce a greater degree of confidence and satisfaction on the part of the people.

So, let meetings be arranged at such times and places as will be convenient to the people; let the programme presented possess features of a popular, as well as a professional interest; let an especial effort be made to call out and interest all, and the results will be more profitable than if the whole time were spent in considering subjects connected directly with work in the school-room.

S. H. WHITE.

Bureau County.—Teacher's Institute convened on Monday, March 31st, at the call of J. A. Mercer, County Supt. The meeting was held at the high-school hall at Princeton. W. H. V. Raymond gave most of the instruction, assisted by Henry L. Boltwood, and evening lectures were given by both instructors. The time was spent principally on the natural sciences. Over one hundred teachers were enrolled, in spite of unfavorable weather and bad roads.

Cook County.—Evanston school expenses for the year have been:

For teachers.....	\$5,984.25
General expenses.....	786.94
Paid for furnaces.....	500.00
Total expended.....	\$7,271.19

The school is conducted by Mr. Charles Raymond, as Superintendent, assisted by seven teachers. The number of pupils enrolled since last September is 530, and the number now belonging to the school is 410.

Ogle County.—This county stands among the very best in the state in the efficiency of its common schools. This has been brought about by several instrumentalities. The county rejoices in a *good* superintendent—everybody knows that E. L. Wells understands his business: the teachers of the county “lift” together: the people are willing to help. A copy of the *Rochelle Register* of April 5 is before us, in which four columns are devoted to an account of the examinations of the schools at the close of the winter term. The editor would hardly have taken so much of his paper for this purpose had he not believed his readers would be pleased. To our mind this shows a healthy condition of school work. The other towns of Ogle have excellent schools.

We believe no one in Illinois has shown an attendance record quite as good month by month for two years as has Mr. P. R. Walker. Rochelle has a first-class schoolmaster.

Montgomery County.—The *Hillsboro News Letter* has some good thing for education in every issue. The following is a sample.

"There is no reason why we should be in the background in educational matters, as we certainly have been heretofore, if we will only profit by the experience of our best educators. Ask Prof. Whitham, Mr. Dickson, Mr. Gregory, Prof. Jones of the Indiana State Normal University, or any other first class educator, in relation to the necessity of improvement in our public schools, and they will all tell you to enlarge and thoroughly grade *one school*."

Iroquois County.—County Institute met at Watseka March 31st. Dr. Sewall lectured in the court house two evenings. We quote the following from the county paper:

"We cannot forbear giving one sentence from the Dr.'s' lecture, among the many that were very impressive, 'The measure of intelligence in a community is the measure of material values.' Or, in other words, horses, hogs, sheep and lands increase in value as intelligence increases. The succeeding days were taken up in discussing different branches taught in our common schools. By a vote of the members present, the constitution was altered so as to require the annual meeting of the Institute, to commence the first Monday in August, instead of October as heretofore. This seems to be a thing desired and should be heartily supported by all *live* teachers. The design is to secure eminent teachers and organize the Institute on the plan of a school for two weeks, and to make very prominent in this course the study of new branches."

With a club from *Iroquois* for the SCHOOLMASTER came a pleasant letter:

"I secured these names, because I believe in the SCHOOLMASTER, and the grand work its editors are doing for education in the *State*. These persons, above named, would be glad to have the numbers from past February forward, dating their subscription back to that time. If you cannot do this can you send the April number? I think every teacher in the state ought to read the editorial on the work of Institutes in that number, and then *work* to secure such a result."

Springfield.—The March Teachers' Institute met in the high-school building. With one exception the teachers were all present.

The devotional exercises were conducted as usual. After the minutes were read by Mr. Chamberlain, Mr. Bennett took the floor, and made a number of suggestions respecting his work as superintendent.

The teachers were informed that the next term would be devoted to examinations.

The question of holding written examinations each week was then taken up. It was found that most of the teachers were attending to their duty in this respect. The superintendent stated that, as a teacher, he could attend to nothing else while the class were writing, as he always wished to secure a full and honest report. He also stated his inability to make a set of questions on the spur of the moment. He then discussed the question generally, calling for an improvement in this direction, that there should be more work of this kind, and that it should be more thoroughly done. Uniformity had hitherto been urged upon the teachers, with considerable success, but an advance in keeping order was necessary, on account of the great evils resulting to the pupil, in passing from the room of a good disciplinarian, to a place where carelessness and disorder prevailed, and vice versa. Finally, close attention to details was advocated as an element of success.

Mr. Willcut then gave the usual lesson in penmanship. The letters O, D and E, will constitute the lesson for the pupils of the ward schools, during the coming month. The different points to be brought out, and the errors to be obviated, were carefully illustrated on the blackboard.

The next subject was a class exercise, in arithmetic, by scholars of the first grade, under the charge of Mrs. P. A. Baird. The topic assigned was the extraction of the

cube root. The demonstration of the rule was thorough and exhaustive, being illustrated by blocks and drawings made by the pupils on the blackboard. The regularity, and beauty of the drawings were commended. The interest and acquirements of the class showed industry and enthusiasm on the part of the teacher.

After recess Prof. John Bach, teacher of German in the high-school, read an original effort in the shape of a poetical translation of a poem by Max von Schenkendorf, on the "Mother Tongue." His effort was well received by the Institute, and, we understand, will be published.

Mr. Sampson then introduced the subject of Drawing, and, after a few practical remarks turned the matter over to the Institute for discussion, in which Messrs. Willcutt, Mitchell and others participated. This subject will be thoroughly attended to hereafter in the schools of Springfield.

The teachers of the first ward were appointed on the committee on programme for the next Institute. As to school matters in the Legislature, the bill making education compulsory will probably pass. The bill for the relief of the county superintendency will fail, it is said, in the House. The bill for the repeal of the law compelling the study of the sciences will also fail.

B.

Knox County.—The county Institute met in the public-school building, Yates city, April 22d, 23d, 24th, 25th and 26th. Messrs. A. J. Thomson, D. C. Harmisont C. W. Parker, A. C. Bloomer, S. P. Lucy, T. C. Swafford, and J. B. Roberts were among the names announced for exercises. F. Christianer, county superintendent, was chairman of the executive committee.

Mason County.—The following, from the *Independent*, is a home compliment for Mr. G. W. Dominic, superintendent of schools. Speaking of the attendance report for April. "By comparing the above report with that of 28 other schools of this state as published in the April number of the ILLINOIS SCHOOLMASTER, we find our school compares more than favorably with them, and in point of attendance is excelled by three only. When he is not engaged hearing recitations Mr. Dominic visits the other departments of the school, thereby maintaining the most perfect system in all the departments from the highest to the lowest. The labor that necessarily devolves upon him to do this, but few appreciate. That he has kept up the attendance to such a high per cent. under the adverse circumstances, we think is a compliment to the superintendent, teachers and scholars."

Danville.—At a recent public school meeting in this city the school question was discussed somewhat at length, after which a committee was appointed to present the names of six gentlemen as candidates for the Board of Education. The following are the resolutions adopted by the meeting :

- 1st. In favor of good schools with competent teachers at liberal wages.
- 2d. In favor of nine months school during the year.
- 3d. Opposed to the use of the rawhide as a punishment of children.
- 4th. Opposed to excluding any branch now taught in the schools.
- 5th. In favor of amending the rules, so that parents or guardians can choose the studies they wish their children to pursue.
- 6th. In favor of a superintendent of the schools.

7th. Opposed to the expulsion or suspension of any scholar except for gross misconduct or disobedience, or being afflicted with some infectious or contagious disease.

8th. In favor of so amending the rules as not to exclude children from the school premises on account of tardiness. Ordered that the board of education be requested to keep the public informed as to their acts and doings.

We recommend the above resolutions to some other small cities of Illinois.

Peoria.—During the past term of thirteen weeks there were examined for promotion in the ward schools 993 pupils. The number promoted was 795, being an average of 80 per cent. of the number examined. The per cent. of promotions to the number examined varies in the different schools from 70 the lowest, to 93, the highest. The practice of detaining pupils after school for the purpose of cramming for examination is going out of fashion. Pupils are not detained at recess except for an abuse of the privilege of recess. Corporal punishment is still indulged in occasionally. At the last meeting of the School Inspectors the question of teaching German in the public schools was laid on the table. Some of the teachers suggest, as an improvement, that the Germans be taught English before they come to this country.

Centennial Celebration in 1876.—From the *Philadelphia Age*, of February 24th, we learn that a most enthusiastic meeting, in aid of the approaching celebration, was held in that city on the preceeding Saturday evening. Patriotic speeches were made by Senator Cameron, Dr. George B. Loring of Massachusetts, Bishop Simpson and others. Letters were read from distinguished citizens of different parts of the country. A long report of subscriptions to the funds for the occasion was read. The total amount reported as already subscribed in Philadelphia was \$1,737,330. The largest contributions were made by the city government, the railroads and the wholesale dry goods dealers. The subscriptions from physicians, dentists and restaurants are ridiculously small, and their announcement was received with hisses and other demonstrations of disapproval.

ILLINOIS NORMAL.

The spring term opened on the 7th of April. Many of the students went home in the vacation, as the railroads gave them opportunity to do so at reduced rates; the roads have granted this courtesy for several terms. The new term opens with a large increase of members. On the 15th of April the rolls showed 303 members in the Normal School; 47 in the High School; 64 in the Grammar School; and 48 in the Primary School; total, in all Departments, 462. Of the number in the Normal School 164, are young men; we think this is a larger number of young men than have ever been in the school before. The students seem in good health and spirits; and the work of the term is in vigorous progress. Many of the classes are very large, often numbering sixty or more. To accommodate such as must soon go out to teach, there is a brief course in each of the four natural sciences required by law. The little Primary Department under Miss Case is a perfect gem of a school.

The first meetings of the Societies for the term were very fully attended. Each Society has a new President; Felix B. Tait is President of the Philadelphian; and

Lewis C. Dougherty of the Wrightonian. Prof. McCormick, near the close of last term, was waited upon at his house, one evening, by section G., who left him richer by several beautiful volumes of standard works. The Christian Associations are quite active; their meetings are fully attended, and are earnest; the Young Men's Association, as usual, "took in the strangers," on the first days of the term, and helped them to find homes.

Many former students have returned to the University this term; among others, A. D. Beckhart, S. A. Murdock, R. L. Barton, John C. Wilson, George M. Davison, Justin L. Hartwell, Newton O. Wise, and Misses Isa Ray, Anna Boller and Henrietta Watkins.

During vacation, Robert A. Childs visited Normal; he reports everything prosperous at Amboy.

About the same time, George G. Manning, wife, and child, visited Normal; he brings a good report from Peru, Indiana.

Miss Ruth E. Barker was married, April 9th, to Isaac Scarritt, Esq., President of the First National Bank of Alton; the wedding, a very quiet one, was celebrated at the house of the bride's mother in Normal.

Miss Martha Reynolds, a student in the Normal School last Fall, died recently at Jacksonville.

Charles L. Howard gave us a call a few days since; he is now general agent for the Excelsior Furniture Company of Cincinnati; his headquarters are at DuQuoin.

Miss Bandusia Wakefield visited the University the second week of the term; she has closed her work at Winterset, Iowa.

Samuel W. Paisley, we hear, is doing a good work in the schools of Watseka.

Dr. John T. Curtiss is practising medicine in Jersey County; the name will be familiar to "old Normalites."

The same class of Ancients will be glad to learn that HENRY B. NORTON has promised to attend the Alumni meeting next summer, and to take part in the exercises. He is now trading in the Indian territory.

NOTES.—*Punch* says the fixed stars are *suns*, but the shooting stars are *darters*——Ladies constitute from thirty-five to forty per cent. of those who are now undergoing the civil service examinations at Washington. The examinations are conducted with great thoroughness, and, necessarily, with entire impartiality. Six hours are allowed candidates to pass upon the various questions and problems presented. Most of them finish inside of that time.——France is threatened with a very serious evil—a strike among the national teachers. The desire to become an instructor of youth is daily more unpopular; pupils cannot be found to enter the training colleges. The profession is miserably paid, surrounded by narrow restrictions, so that the Dominie Sampsons prefer the independence of citizens and the higher pay as clerks.——A Dublin chambermaid is said to have got twelve travelers into eleven bed-rooms, and yet to have given each a separate room. Here we have the eleven bed-rooms:

1	2	3	4	5	6	7	8	9	10	11
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"Now," said she, "if two of you gentlemen will go into No. 1 bedroom, and wait there a few minutes, I'll find a spare room for one of you as soon as I've shown the others to their rooms." Well, now, having thus bestowed *two* gentlemen in No. 1, she put the third in No. 2, fourth in No. 3, the fifth in No. 4, the sixth in No. 5, the seventh in No. 6, the eighth in No. 7, the ninth in No. 8, the tenth in No. 9, and the eleventh in No. 10. She then came back to No. 1, where you will remember she had left the twelfth gentleman along with the first, and said: "I've now accommodated all the rest, and have still a room to spare, so if one of you will please step into No. 11, you will find it empty." Thus the twelfth man got his bedroom. Of course, there is a hole in the saucepan somewhere; but I leave the reader to determine exactly where the fallacy is, with just a warning to think twice before deciding as to *which*, if any, of the travelers was the odd man out."—*Chambers's Journal*.

BOOK TABLE.

No notices are ever inserted in this department, for which a price is paid. The BOOK TABLE of the SCHOOLMASTER is entirely independent of outside influence. Books are discussed upon what appears to the reviewer to be their intrinsic merits. The primary object of our book notices is to give to our readers the benefit of the opinion of the SCHOOLMASTER. All books sent to us are thankfully accepted; we are desirous of receiving all new works. The reviews may not always be just, but they certainly will come from the pens of fair-dealing and unprejudiced persons, and will be written only for the benefit of others, never for pecuniary reward.

The Logic of Accounts; by E. G. FOLSOM, A. M., proprietor of the Albany Bryant and Stratton Commercial College. A. S. BARNES & CO., NEW YORK AND CHICAGO. 442 pp., price \$2.00.

In this book the author has endeavored to give a more thoroughly logical explanation of the *Science* of Book-keeping than we remember to have seen before; but he has by no means neglected the *Art* in his exposition of Science. He gives the philosophy of the work first, starting with a definition of values, classified as *commercial* and *ideal*, and of the laws of exchanges. The larger part of the book is devoted to practical work, with examples and full explanations. The work in this department is strictly progressive, beginning with the simplest forms, and proceeding to the most difficult. All his explanations of methods are based upon the philosophy already explained. Still, he fully recognizes the fact that "all the *forms* of accounts we shall never know," but insists that the underlying *principles* are everywhere the same. This is doubtless unquestionable; and it is a truth that should ever be borne in mind in all instruction in Book-keeping. The last twenty-five pages contain careful questions on the work. We do not think this book is adapted to the use of pupils who propose to learn only the elements of book-keeping; but for their teachers, and for those who propose to *master* the whole subject, we should deem it well nigh indispensable.

The author is not always quite happy in his expression; and occasionally he allows himself to use a word in a manner not justified by the Dictionary. For instance, "to intuit" as a verb, p. 5, and "borrow" for borrowing, p. 23, and in other places.

Apgar's Geographical Drawing Book; by E. A. & A. C. APGAR. COWPERTHWAIT & CO., PHILADELPHIA.

In this thin quarto are given full directions for drawing North America, the United States, together and in sections, South America, Europe, England and France, Asia and Africa. The system used is that sometimes called *triangulation*, or by the use of construction lines. A very commendable feature is the giving of the lengths of these lines in miles, as used in drawing the States. The heights of the mountains and the populations of the cities are shown by appropriate symbols. The maps themselves are very pretty.

Rose Thorpe's Ambition; by MRS. M. E. ROCKWELL. J. C. GARRIGUES & CO., PHILADELPHIA. 348 pages, price \$1.25.

This is a very readable story, having more than one excellent moral. It is a good book for Sunday Schools, and contains many hints that may be of use to teachers of day schools; and some that ought to be most strongly impressed upon fathers and mothers who have sons and daughters that they wish to bring up rightly; and yet thousands of them are making the mistake of Dr. Thorpe or of Dr. Phillips. The heroine of the story is the daughter of an intelligent father living among the mountains of Pennsylvania, who has become discouraged and gloomy in consequence of hard work and a lack of prosperity in worldly affairs. By the ambition and energy of Rose, better days come to the whole family; she begins her career as the teacher of a country school. We must believe from the author's description of "boarding around," that she "knows how it is herself." The book is thoroughly orthodox in tone; but its aim seems to be to show the "sweetness and light" of a true Christian life. We are sorry to observe that the author trips in her English occasionally; "To gracefully perform," p. 101, and "one be blameless, if they fail," p. 168, are hardly the right specimens of language to put into the hands of young people. Nevertheless, these are rather slight blemishes in a really good work.

Woman in American Society; by ABBA GOULD WOOLSEN. ROBERTS BROTHERS, BOSTON. 271 pp., price \$1.50. For sale by HADLEY BROTHERS, 136 State street, CHICAGO.

This work seems to be a re-print of essays that first appeared in the *Boston Journal*. They deal with very important subjects on which the writer speaks "out in meeting," with an independence that is refreshing. On such topics as "Ornamental Young Ladies," "The Accomplishments," "Invalidism as a Pursuit," "The Feminine Mania for Clothes," "Evening Parties," "Charitable Fairs," "The Reforms needed in Dress," etc., she has things to say that are worth hearing and attention. On p. 20 she touches the subject of pet, Frenchy names for women, as follows: "The queenly Elizabeths and Catherine's, the noble Margaret's and Helens, with all their historic and family associations, are sunk in the rapid, characterless Lizzies and Katies, the Maggies and Nellies, which appear so absurd on the printed page. * * * No one can read down the register of girls' names in any school-catalogue, with its inevitable call-me-pet-names-dearest-air, without wondering that teachers, as well as school girls, should be so lost to all sense of the purity of the English tongue, and the honor and dignity of the female sex," to all of which we respond by a hearty *Amen*. We do not think she believes much in "tatting;" neither do we. It seems to us, however, that the logic of the book is decidedly *feminine*; the writer constantly speaks as though the evils

under which she and her sisters groan, are imposed upon them by some resistless and tyrannical power outside of themselves. For our part, looking at the matter with a man's eyes, we feel inclined to say that, if women wish to change such of their customs and habits as they find to be belittling, corrupting and burdensome, in the words of Anna Dickinson, "What's to hinder?" All persons who feel an interest in the "Woman Question,"—whatever that may be—will want to read this work, we are sure.

Bits of Talk about Home Matters; by H. H. ROBERTS BROTHERS, BOSTON. 239 pp., price \$1.00. For sale by HADLEY BROTHERS.

This author understands thoroughly the art of "putting things;" and she has put things in this book that demand the careful attention of every man and woman in America. Especially ought teachers and mothers to read and ponder what she says. We cannot *fully* agree with all she says, especially on the subject of corporal punishment, but we find ourselves commending her terse and tender—sometimes fiery—utterances many times, where we disagree once. She takes the part of the weak and lowly so valiantly and lovingly, that we say "God bless her;" and yet at times we doubt if she has ever been a mother or a public-school teacher herself. The essays are all short,—really *bits* of talk, but they are keen and pointed as a needle. Rarely have we read anything that seemed to us better, or more needing to be said, and to be said *just now*, than the last essay in the book. We say emphatically to all teachers and mothers, get the book and read it; it will do you good.

The Best Reading; a classified bibliography for easy reference. G. P. PUTNAM & SONS, NEW YORK. JANSEN, MCCLURG & CO., CHICAGO, 1872.

This book contains the names of the valuable works on the most important subjects of the day. The list is classified, so that the works on any given subject can be readily found and the price ascertained. It is often in every one's life that much trouble is caused by not knowing where or how to find definite information upon a given subject; this book affords valuable assistance in this direction. Here we have the whole scheme of knowledge before us with the exception of some technical and fictitious works. As an illustration we give the first ten names in the index of subjects:—Abyssinia, Acoustics, Afghanistan, Africa, Agriculture, Alabama, Alaska, Albigenses, Algiers, Alps. This index covers five closely printed pages. We believe the selection of books given is well made.

After this classified list, the book contains essays on reading, suggestions for courses of reading, on owning books, and hints to book clubs. This is a good book for teachers.

On the Eve; by J. S. TURGENIEFF. HOLT & WILLIAMS, NEW YORK. JANSEN, MCCLURG & CO., CHICAGO.

This is an American edition of the English translation—one of the *Leisure Hour* series. Aside from the value of the story, these books serve to introduce the reader to Russian people in a pleasant, agreeable style. One feels much better acquainted with the people and their institutions after reading these volumes.

PERIODICALS.

Scribner's Monthly improves, difficult as it may seem. The numbers for March and April, we think, are the best that have been issued. There are many articles in these two numbers of special interest to teachers.

The *Atlantic Monthly* is, we believe, generally recognized as the leading literary monthly of the country. It may not have the popular characteristics of some of the other journals. It is not specially designed to please or interest the ignorant and the unthinking; but its high literary character, its nice critical judgment, its excellent taste, its sterling worth and its able editorial management, commend it to all who appreciate a magazine representing the advanced culture of the times. Under the editorship of Mr. Howells, it is losing nothing of the high character which it has so long sustained. The monthly notices—more extended than formerly—of recent literature, of art, music, and politics, give to it an increased interest. The May number is before us, and it is filled with good things. More teachers should take and read the *Atlantic*.

PUBLISHERS' DEPARTMENT.

We point with pride to our advertising pages; our patrons are among the most reliable business houses in the country, and the character of our advertisements is such that we have no reason to be ashamed of them. We mean that they shall remain so; when we cannot live without advertising humbugs, quack nostrums and doubtful articles of any kind, we propose to quit the business. We frequently receive advertisements which we decline because we think them unsuitable; we are obliged often to decline others, not because they are in themselves objectionable, but because they are sent by advertising agents who demand their insertion at a ruinous discount from our regular rates. We think our rates are reasonable; and, if we have any concessions to make we prefer to make them to our regular patrons rather than to agents.

We remind our subscribers again that our terms are strictly *in advance*; when the subscription expires, the magazine will stop unless it is renewed. By this method we avoid the sending of *dunning* letters; and our paying subscribers are not obliged to make up the deficiencies of those who do not pay.

We have received several fine clubs lately. That is right, friends; please "to do it some more." There are many teachers who will subscribe, if personally solicited, who will never do it, otherwise. Examine our premium list, and send us the names and money as fast as you get them.

To any one who will order, through us, text-books at regular rates amounting to six dollars or more, we will send the books at regular rates, and one copy of the SCHOOLMASTER one year, *free*.

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER,
Volume VI.

ILLINOIS SCHOOLMASTER.

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MISS SNOW'S EXPERIMENT.

Miss Snow was in despair. Before her lay a pile of compositions of the usual school-girl and school-boy type, whose subjects, also of the usual type, ranged through metaphysics and meteorology; from "Faith," "Hope" and "Charity," to "Spring," "Summer" and "Winter." Such a writing-from-a-sense-of-duty air pervaded the whole! Scarce one real, genuine child-thought among them!

"I don't wonder they hate to write compositions," she said, "if they think they must write such bookish things as these. But I know there must be a more excellent way, if only we could find it. Children love to talk, why shouldn't they love to write. But I seldom find boys or girls in their teens, who are able to evolve ideas out of their own consciousness. We begin at the wrong end; we ought to help them to accumulate ideas by teaching them to observe and to think, before we require them to write. But how? that's the question." Miss Snow's head went down on the sofa pillow, and for half an hour she kept up a terrible thinking. Then, springing up with a triumphant "I have it," she went to work.

How she did work for the next two weeks! Libraries were ransacked, every chemistry, mineralogy and encyclopedia consulted; even the Bible yielded fruit to reward her search. She coaxed the Professor into telling her all he knew about her subject, and into lending her some of his choicest specimens and chemicals.

She told her scholars they need make no preparation for rhetorical

exercises that week, except to bring pencil and paper. "What are we to do?" they asked. "Come and see," she said laughingly, and that was all they could get out of her. Of course they were all "dying to know," and she let them die, knowing it was not dangerous. Their curiosity was not lessened by what they saw on her table, as they came trooping in, that memorable Friday afternoon. First was a decanter, with a greenish yellow fluid in it, and beside it a glass, like a wine glass, only larger. "I wonder if it's a new kind of wine, and she is going to give us all a drink," said Ned, the irrepressible; but the rest were shocked at such an idea in connection with their tee-total teacher. Then there was a stone, at least it looked like a stone on one side, but when it was turned around the children were not so sure, it sparkled so like bits of glass, all stuck in edgewise; then there was a wide-mouthed bottle, with some queer looking bits of stick in it; a box, shut so tight that even their sharp eyes could not see what was in it, and a salt-cellar, full of salt.

"As you like to talk better than you do to write," she said, "we will talk to-day instead of writing." Taking up the salt-cellar, she continued, "We will talk about salt." "Pshaw!" exclaimed Johnny, "we know all about *that*, and can tell it all in two minutes. "How many of you think so?" said Miss Snow, for reasons of her own, wisely ignoring his lack of politeness. Three-fourths of the scholars raised their hands; but, as usual, those who really did know the most, kept still.

"Well Johnny, tell me all you know about salt."

"Why it's just salt, and good to season victuals, and to keep meat from spoiling."

"And to give to cows to make butter come quick," added Tom, who often suffered martyrdom at the churn. That was the extent of their knowledge; and the majority didn't seem to know much more. At least, if they did, they did not know how to tell it.

Miss Snow poured some water into the glass and dropped in some salt. "What now?"

"Why it dissolves, of course."

"What do we say of any thing when it dissolves?" "We say it is soluble," answered thoughtful little Emma. "Then, that is one of the properties of salt, let us write it on the board, under 'properties,'

and see how many others we can find." She then threw some salt on the fire, and it sputtered and frisked around at a wonderful rate. "Oh! Miss Snow, what makes it do that?" exclaimed Sam. "Because there is water in each little grain," she replied; "when any thing acts like that, while burning, we say it *decrepitates*, that's a new word and a hard one, but I will put it on the board, so you can learn it."

Now she took up the stone and held it so that the strong sunlight fell on the crystals. "Beautiful!" "pretty!" "splendid!" chorused the children. "Yes, and this is salt too, just as it is dug from the earth. This piece came from Louisiana. Before the war, nobody knew there was more than one place in America where rock salt was found—that is in Virginia; but, during the war, the rebels were shut off from all the old salt-works; and, in hunting for salt, discovered this bed. There is one other place in our country where rock salt is found, on Salmon River, Oregon, and that is all; most of our salt comes from springs. Now tell me what we call a structure like this, made up of crystals." "Crystalline." "That's right; we will put that down among the properties." She then took from the box a beautiful crystal, three inches long and half as wide. It looked clear as glass, and, as she held it between herself and them, the children could see Miss Snow's bright eyes through it; thus they learned that salt is transparent, though they had hard work to believe that this beautiful crystal was nothing but pure salt. She then showed them that what glass is to light, salt is to heat—transmitting it perfectly; so they learned the meaning of *diathermous*. Thus they went on, till the list of properties had run up to ten. Every eye was now sparkling, and even Johnny was forced to confess, away down in his heart, where no body would know it, that he did not know quite all about common salt.

"Now let us see of what salt is made," said Miss Snow; "who can tell?" "Out of salt water, I suppose," said Jimmy. Of course, all laughed at this answer, but none could give any better. "I did not suppose you could tell," she said, "so I will tell you." She held up the decanter and the wider mouthed bottle, saying, "These are the parents of our salt; it doesn't resemble its parents much, does it? it is not the least particle like either of them. This gas in the decanter—for it is a gas, only it is dissolved in water to keep it from running away from us—is Chlorine; you see its greenish yellow color."

"I thought gases didn't have any color," broke in Tommy. "Most gases do not; but this has, you see; it has a repulsive odor, and if you should breathe it, it would kill you. Taken all together, he isn't a very agreeable person to deal with,—this father of common salt. And the mother is a queer sort of a body too. "Here she is," holding up the bottle with the queer little sticks in it; "Sodium is her name. She looks as demure as can be, but if I put her in water she will act as though she were bewitched. She will dance around faster than you can, even if some of you do have your brains in your heels; then a blue smoke will rise, and the next thing you know the water will be on fire, actually burning." While talking Miss Snow had refilled the glass with clean water, and fished up one of the little sticks with her penknife; now she cut off a piece and dropped it in the water. It behaved exactly as she said it would, and the children were wild with delight; first the steam and then the smoke ascended, and the room was filled with a stifling odor.

"If the water were warm it would blaze," she said. "O, let me get some warm water," exclaimed Rena. Away she ran home, just across the way, and soon returned with a cup of hot water. Miss Snow dropped a bit of the sodium into it, and it blazed up brilliantly, bursting into hundreds of pieces. But, alas for the awkwardness of amateur chemists! Miss Snow was bending over the cup, and one of the fragments of sodium lodged in her eye and there burned itself away into soda. The pain was intense; but, dreading the confusion among the scholars should she make any "fuss," she pressed her handkerchief to her throbbing eye, and kept bravely on. But she had had enough of experimenting, so she told the children they must take her word for it—that chlorine and sodium put together make salt.

"Now, where is salt found," she asked, writing "Location" on the board. The scholars now thought to better purpose, and soon a long list was made out, including twenty-three of our own States and Territories. Next she wrote, "How salt occurs," and under this head came, "In the ocean, in plains, in deep mines, and in springs."

"If we could take all the salt out of the ocean and pile it into mountains," said Miss Snow, "it would make a range as high as the Alps and five times as long." She told them of the beautiful mountain of pure salt, rising, white and polished, from the plain of Care-

dona, Spain, and of the immense salt plains of South America and of Asia. "As we approach these salt fields," she said, "the character of the vegetation changes, for you know our grasses and most of our plants will not grow where there is salt. But some kinds, like our asparagus and the English saltwort, like salt; we call such, saline plants. As we enter these fields, we find first saline plants, but gradually even they disappear, till there is nothing to be seen except salt, salt everywhere. But now, when there are no real plants, the salt itself makes mimic ones, just as the frost does on the window pane, after it has killed all the flowers, arranging itself into forms and shrubs, leaves and flowers. Sometimes the mirage—"what is mirage, Mitty?" Mitty was in the physical-geography class, so he could tell all about it, after which Miss Snow continued, "the mirage makes these dry salt plains seem covered with water, like great lakes. Sometimes the wind, from a sand desert near, sweeps over the salt plain, bearing with it a fine red sand, which it scatters over the salt, making the plain look like a petrified ocean of blood. Sometimes these plains are wet, salt marshes—the most desolate regions on earth."

"What is the next way in which salt occurs?" "In deep mines," chorused a dozen voices. "Do you know where the most wonderful mines are?" "In Poland," said Ellen. "I read all about them in an old *Harper's Monthly*. Such beautiful things! Great galleries and cathedrals, and kings and queens, and a great lake, and thrones and fireworks, and arches and pillars, all made out of salt." "Especially the lake and the fireworks," said Miss Snow, laughing. Ellen blushed from folly, but Miss Snow's "Of course I know you don't mean that," re-assured her. "I am glad you read the magazines, Nellie; you will find more about salt in an old number of *Putnam*, April, 1869, I believe; I wish you could all read both these articles. Miss Snow looked at her watch. "I see we shall not have time now to talk about salt springs, the way in which salt usually occurs in this country, nor of the various ways in which it is obtained from springs and from mines. I intended to tell you this, and also about the various uses of salt, some of which I presume you never suspected; also, about what salt is a symbol of, and of the sacredness in which it has been held from the earliest ages. Turn to Lev. 2: 13, and you will

find that God himself commands its use in sacrifices. Most heathen nations use it thus."

"May I ask a question, please?" said Julia. "Certainly." "What do the expressions, 'above the salt,' and 'below the salt,' signify? I came across them in Walter Scott's works, and I don't know what they mean." "I am glad you asked the question, Julia; in those old times of which Scott wrote, the lord with his knights and retainers all sat at one long table, spread in their great dining-hall. At the head, sat the lord; those highest in rank or in favor sat next, and so on; thus the lower end of the table was occupied by the humbler retainers and servants. A huge salt-cellar stood in the middle of the table, separating the noble from the menial retainers; so, 'above the salt' came to signify the place of honor, and 'below the salt' the reverse." "And our 'individual salts' may show that now all men are equal, for, as each one has his own, there can be no 'above' or 'below the salt,'" said wise Theodore.

"An excellent idea," responded Miss Snow. "Now, who can tell me what this phrase means, 'the salt has lost its savor?' Our salt cannot lose its savor, how could that of Palestine?" Nobody could tell. "Well, study upon it awhile and tell me Monday. Here are some more questions you may think about. Read what Paul says about salt in Col. 4: 6, and tell me what he means. And you may tell me what kind of salt, 'Attic salt' is."

"Now, how many of you have learned any thing this afternoon?" Every hand went up like a flash. "How many want to tell me what you have learned." "I," "I," came from forty voices. "You, Julia." "I've learned what 'above the salt' means." "I've learned what salt is made of," said Benny. "I've learned where its found," said Mary. "I've learned not to bend over sputtering things, for fear I may burn my eyes out," said Robbie. "Good for you, I've learned that too," said Miss Snow, laughing, "but I wish I had learned it a little sooner."

"Now if you all talk at once, I cannot hear you, and if you talk one at a time it will take you all night to tell me all you know, so you may write down, on your papers, what you would like to tell me. Write as fast as you can, and whenever you have a page written, raise your hand."

Every head was bent over the desk ; each hand scribbling away for dear life. One, two, three minutes passed and no sound was heard but the scratching of pencils. Then up went one hand and another and another. " Good, keep on ; write another page," said Miss Snow. At the end of five minutes, forty hands had written forty pages and were busy on as many more. Thus the work went on for fifteen minutes, when Miss Snow tapped the bell for them to stop writing, and collected the papers.

" Oh ! don't take mine, it is scribbled so horridly !" exclaimed firm little Lusie. " No matter for that," said her teacher. " Of course you can't help scribbling when you write so fast. You may have your papers Monday, and make them as proper as you choose ; but now I want to see them just as they are."

This is how Miss Snow taught her scholars to write compositions, without their suspecting they were doing any thing so dreadful. And now Miss Snow gets compositions which are the delight of her heart.

MARY ALLEN WEST.

THE MICROSCOPE AS AN EDUCATOR.

CONCLUDED.

Deceptive appearances under the microscope have been alluded to. It is still common for instructors (?) to talk of human hair as cylindrical and hollow. It is a matter of no great difficulty to obtain sections of hair so short that the pieces naturally fall in a position which presents the cross section for examination. It is easy to note the pith, if you please, that occupies the central portion of the hair. It is also interesting to note the various forms of the cross sections of hair, some being circular, others elliptical or even kidney shaped, others still being constricted across the centre, reminding one not unnaturally of some of the forms of the Diatomaceæ. But *are* they solid ? perhaps you persistently inquire. Well, that depends considerably upon what the word solid is understood to imply. If a corn-stalk, or a sun-flower stalk, or an oak twig, or a hickory withe is solid, why, yes. But you drive the mercury through the solid wood

by properly applied pressure, thus showing the universally present porosity. It is left for the microscope to subject a few so-called solids to a closer scrutiny. Put the cross section of the sun-flower stalk, the corn-stalk, the oak twig, or the hickory withe under the microscope. You see abundance of space, and a comparatively small amount of woody fibre. It is evident at once that cellular structure is botanically no misnomer. The truth irresistibly forces itself upon our attention, that the pores in most if not all cases actually occupy much more space than does the wood.

The question of the distinctive differences between animals and plants is no doubt yet an open one, and principally so on account of facts brought to light in investigation with the microscope. The true line of demarcation which separates the animal from the vegetable kingdom is yet to be surveyed. A trial line to be sure has long been staked out, but the offsets on either hand are so numerous that the present position is far from satisfactory. Once, sensation and voluntary motion were the characteristics of animals as distinguished from plants, while the growth of an organism from a root, its putting forth buds and thus increasing, were held indubitable evidence of its vegetable nature. *Mais nous avons change tout cela.* We "cheerful fellows who squint through tubes at flies' ears" (vide *Chicago Times*) find animals in abundance growing from a root, putting forth buds and branches, raising matured individuals, each after its kind, which eventually separate themselves from the parent stock and revolve into some convenient *locale* where they take root and become in turn the parents of succeeding generations. Nay, we have them each with a flexible stalk which, at the will of the animal, contracts spirally toward its own base on the slightest disturbance, and, anon, the spiral uncoils and the animal reaches out a dozen times the length of its body, putting forth its cilia to excite currents of water, which thus bring it food from its watery world around. The paleontologist can scarcely fail to be reminded here of the encrinal remains so profusely scattered through our sub-carboniferous limestones, and of the pentacrinus caput-medusæ of the West Indies, their only living representative.

On the other hand there are myriads of vegetable organisms which as truly have a voluntary motion as the veriest leviathan that ever

lashed the sea afoam. We see living diatoms in countless numbers and of more than kaleidoscopic variety, adorned with sculpturing the most exquisite, each pursuing its way, seemingly intent upon some important business, slow but sure. In the swarming season of the desmids, however,—another large class of vegetable organisms,—we may see thousands upon thousands of individuals turning and writhing in the most rapid and energetic manner, the eye being as unable to follow one of them as it would be to follow a single bee in a summer swarm.

The *definitions of science*, then, are evidently *only provisional*. To our children we give partial definitions, that we may not confuse them with a multiplicity of details. In the same way our definitions for adults are equally awaiting modification by any advance in our scientific information. The microscope tends constantly, from the very nature of the case, to educate our percepts. Unfortunately, it at the same time too often educates the imagination, which is frequently not kept within even moderate restraint. Hence, the dissemination of error. No doubt many people have seen human hair more or less magnified, and by having seen it just without or just within the focus of the objective have noted the longitudinal line of light always reflected from the surface of a comparatively smooth cylindrical body. But the presence of this delusive shimmer on the outer surface of a stove-pipe made of Russia iron, is far from being the *evidence* of its want of solidity.

So the spines on the surface of the test podura scale were pronounced by the most eminent of transatlantic microscopists, hemispherical protuberances from its surface, because the observed phenomena in its examination were the same as could be produced by a peculiar disposition of the light reflected from bodies of such shape. This was at best but a sorry species of reasoning, and subsequent results have plainly indicated the fallacy of the conclusion, as recently by electric shocks the spines have been plainly separated from the surface of the scale.

Lastly, the search into any however limited corner of the boundless realm of nature, can hardly be without its ennobling influence upon the mind and heart. If, as was once said, "The undevout astronomer is mad," what shall be said of him who studies the habits of

the creatures of the microscopic world, who cannot plainly see the hand of an inscrutable wisdom directing the formation of organisms so wonderfully minute, and yet of such tremendous consequence? What shall be said of the remains of myriads upon myriads of forms in every slough and ditch where moisture has ever been, and of the scarcely less numerous living forms in every nook and corner and foot-place where moisture is? What shall be said of the strata of chalk, composed of unnumbered millions of the calcareous shells of microscopic animals; what of the deposits of earths in various localities, as that extending beneath the city of Richmond, Va., and a large part of Maryland, of which the least morsel visible to the unassisted eye contains the marvellously beautiful remains of thousands of forms which lived and flourished and died, far, far back in the untold æons of the shadowy past? 'Twas but a tithe, nay, the veriest shadow of the truth, that the poet told when he apostrophized his reader in

"Take the wings
Of morning, pierce the Barcan wilderness*
Or lose thyself in the continuous woods
Where rolls the Oregon, and hears no sound
Save his own dashings,—yet the dead are there;
And millions in those solitudes, since first
The flight of years began, have laid them down
In their last sleep,—the dead reign there alone."

O. S. WESTCOTT.

*The subjoined statement from the distinguished author of "Thanatopsis" will doubtless be of interest to any who at Springfield were disposed to question the accuracy of the above quotation.

NEW YORK, Jan. 25, 1873.

DEAR SIR:—*You were right in your quotation.* The line from *Thanatopsis* which you mention has had its last alteration and that is as you have given it.

—"pierce the Barcan wilderness."

O. S. WESTCOTT, Esq.

I am sir, respectfully yours,

W. C. BRYANT.

We have often urged, through the *SCHOOLMASTER*, the importance to teachers and superintendents of the use of the local press. Every county paper could and should have an educational column: the editor would gladly give place to the pedagogue. Public opinion is molded by the Press more than men are willing to admit. It is with pleasure we notice the growing tendency to introduce such a department into the local papers: recently Mr. Frank Matthews has commenced his editorial career in the *New Era*, of Stark county, Illinois. Let others do likewise: the returns are sure.

INSTRUCTION IN ENGLISH LITERATURE.

I have an acquaintance who observes carefully the hand-books and the mechanical journals that treat of the use of iron and of its combinations. Yet he finds himself obliged continually to refer to his own investigations. He finds difficulties which books do not explain. He gathers the iron of Pilot Knob and of the Iron Mountain, the metal of Lake Superior, the pigs from the Scotch furnaces, and the product of Pennsylvania mines. He combines that prepared by the charcoal blast and that prepared with other fuel, till he has the needed proportions for hardness and toughness. When he has a combination selected which he hopes to use for months following, he sometimes finds some subtle influence, too minute for detection by chemical analysis, that disappoints his expectation, and a new series of trials in new combination is made to secure due tenacity or strength.

As with the iron-worker, so with the student of language, text-books serve an important purpose in pointing out a few general and accepted principles. The higher knowledge in each case must come from wide comparison of experience and by careful tests under personal investigation.

Even when one has had a reasonable degree of success in teaching a few of the preliminary technicalities to be used in describing words and in analyzing sentences from some grammar, he is apt to reach a point where the limitations of any single book, no matter how valuable it may be, are painfully apparent. Diversified criticism and a wide range of material from the language itself, are necessary to give broader views of the power of language and of its usages. The scholarly teacher who has at command a well selected library, accessible to his pupils, can readily arrange to give them the benefit of wider investigation. Few of our schools are provided with many books additional to the standard dictionaries, and many teachers find no money available to extend the list. A single compendium of English literature exhibits about as much of the grandeur, beauty, and power of the language as the sample table of a commercial

traveler in a country hotel shows of the metropolitan wholesale establishment that sends him out. If all of the class have books alike, the range is unavoidably narrow. As soon as a class has mastered some one of the simplest of our common school grammars, a plan like the following may be pursued. It has sometimes worked well. It gives much and varied available criticism on linguistic forms and peculiarities. It gives each pupil something more valuable than a mere text-book.

After consultation with parents and full explanation of the plan, if it meet with approval, a list of suitable books is to be made out, such as approximate in cost a good standard volume which in the ordinary course would be procured by each member of the class, each one of whom selects a book from the list. The local bookseller will order them for the class, perhaps giving them the benefit of wholesale rates for so large an order. A table or shelf in the school is assigned to the class as a place for these books, which they use with the utmost freedom compatible with the general arrangement of school, as a *class reference library*. Each retains his personal property in the particular book of his selection, and on leaving school carries it to put in the home library.

The recitations can be upon a topical plan, in which the teacher may require a full account of some writer, with his relation to his country's history and to the contemporaneous history of other countries, his peculiarities of character and of style, to be followed by a like examination of others in chronological order or in any other order that circumstances render most suitable. In our large towns, should it at any time be desired to have uniform books in the hands of the class for temporary use, copies enough of the writings of Shakspeare, Burns, Moore, Milton, Whittier, or Longfellow can be readily obtained by the pupils from their personal friends. Should these fail, the higher Readers in all our schools form respectable compendiums, embracing selections from almost any of the prominent authors. Teachers who have felt the hindrances of the usual provision of books will form methods of their own to get the benefit of the wider facilities which this plan offers. The following list comprises books no one of which I think is retailed higher than the price of Cleveland's Compendium of English Literature. Some of the books named cost

much less. A teacher with a class of a dozen advanced pupils would find a great gain if they could each have a book like any one of these, yet no two alike. The teacher will find a little hand-book called "March's Method with the English Language," of great value in his own preparation for the class.

The Bible is the universal English classic, and a good Concordance is therefore fit to head the list:

Cruden's Concordance; Crabb's Synonyms; Fowle's English Synonyms; Roget's Thesaurus; Wheeler's Dictionary of Noted Names in Fiction; Bulfinch's Age of Fable; Bulfinch's Age of Chivalry; White's (R. G.) Words and Their Uses; Trench's English, Past and Present; Trench's Proverbs and their Uses; Marsh's Lectures on Language, 1st series; Marsh's Lectures on Language, 2d series; Muller's Science of Language, 1st series; Muller's Science of Language, 2d Series; Whitney's Language and the Study of Language; Haines' English Literature, school edition; Tauchnitz's Five Centuries of the English Language and Literature; Fowler's English Grammar, large octavo edition; Cleveland's Compendium of English Literature; Cleveland's Compendium of American Literature; Shaw's Compendium of English Literature; Spalding's Compendium of English Literature; Royse's Compendium of American Literature. Some one may desire the higher priced Haydn's Dictionary of Dates, a library in itself, and now brought up to January, 1871. Some one may want the octavo volumes, two of which form Craik's English Literature. Of smaller books, Craik's English of Shakspeare, which is a critical analysis of the play of Julius Cæsar, and the books prepared by Prof. Hudson upon Shakspeare for school use, are valuable, as are other books that might be named. There are poor books loudly praised: it is important, therefore, to have personal knowledge of the books commended to a class. The teacher who is satisfied with mere memorizing of the formalities of text-books cannot use this plan effectively; but it opens rich rewards in class interest and in personal profit to the teacher who is so situated as to adopt the plan heartily.

JAMES H. BLODGETT.

ROCKFORD, ILL., May, 1873.

TEACHERS' MEETINGS.

The efficiency of any school which requires two or more instructors can be increased by frequent consultations between the teachers. The manner of conducting these meetings, and the frequency with which they are held must be determined by the circumstances. The propriety of devoting such hours to academic instruction is doubtful. If the teachers have not properly prepared themselves in relation to matters of fact in the branches they are required to teach, before obtaining their certificates, it is their duty to study diligently at home in advance of their classes, or, better, leave school and enter an academy or normal school, and devote the entire time to learning. The following is suggested as one method of conducting teachers' meetings in village schools. The plan supposes the school to be an entirety under the control of one manager. The meetings should be held weekly : not evenings, because it is not convenient for ladies unaccompanied to assemble evenings ; nor Friday afternoons, because teachers are tired and worn by five days' hard work. Monday seems to be the least objectionable. If school is closed on Monday afternoon one-half hour before the regular time, the teachers of the village can assemble in one of the school-rooms within fifteen minutes from the time of closing school. The superintendent or principal should call the meeting to order. Let him then call on each teacher by name for remarks. The teachers have learned to prepare for this call by keeping careful notes during the week. Let the argument, that keeping notes weakens the memory, pass for what it is worth, it is true that teachers come better prepared for the work of teachers' meetings when every event worthy of comment has been committed to paper promptly on the day of the occurrence ; besides, it is neither convenient nor proper to speak of every matter of school discipline whenever teachers happen to meet in the school-room. There will be time to listen to the remarks of every teacher. Most of the notes will be in the form of questions. What to do under the circumstances ? How to reach this dull pupil ? How to discipline that mischievous one ? How to remedy tardiness in a particular family, or obtain better attendance ? Each teacher will have cases of especially

bright or forward pupils whose classification needs changing, or stupid ones that need urging in some extraordinary manner: some one wishes to omit some study which ought to be the regular work of all her class: another wishes to take an extra study in the grade above that in which she is. These are examples of subjects that will come before the meeting every week, and each one brings up a case with modifications that make it unlike any other case that ever before existed. As no case of discipline ever was or ever will be exactly similar to any other case, so no question of school economy has an exact counterpart in the history of the school. The united experience and wisdom of all the teachers, whether there be three or twenty, should sit in judgment on every one. The teachers will not agree as to the methods of cure in each case. It must be the principal's duty to make the final decision; but his judgment ought to be formed not merely from his own experience, but from the sum of the experiences of all. Then, too, no one teacher in a village school can be conversant with all the families represented in school. All teachers together can manage to learn something of all families and report for the benefit of the whole; for, upon home discipline and surroundings, more than upon any other one thing, depends the course of treatment that ought to be pursued in any individual case.

The principal has during the week kept careful notes of all he has seen, whether good or bad, in the conduct of the school. From these he makes his remarks to the meeting. Errors in teaching or disciplining are thus brought to the notice of the entire corps, and by making the criticisms thus general, the pride of any individual teacher is not wounded by special or direct reprimand. Better results are reached than would have been had the correction been confined to the ears of but two. The one or ones who are in fault will never fail to appropriate the criticism and profit by it. No general change in the management of the school should be inaugurated until a full and free interchange of sentiment is had at the teachers' meeting, and not then until the possibilities of failure are carefully considered. For every change in general discipline if unsuccessful works irreparable injury. Every teacher of experience realizes this, as well in cases of individual discipline as of the whole room.

GRADED-SCHOOL COURSE.

New England School Superintendents, at their December meeting at Worcester, received the following programme of studies. We give it to our readers because it is the best attempt we have seen to present to the eye the graded-school work. It should ever be remembered, however, that any fixed system is dangerous. Some of the western cities are suffering more than they like to tell, from the effects of a signed cast-iron gradation. Supt. Harris, of St. Louis, is the first man to point out a relief from their misfortune.

The programme includes nine classes, the work of each class covering a period of one year.

The classes are numbered from one to nine, the lowest primary being the first, and the highest grammar the ninth, class.

The number of hours per week allotted to each study or exercise is indicated by the figure or figures annexed; the whole number of school hours per week being twenty-five.

FIRST CLASS.

	Hours.		Hours.
• Reading	10	Music	1
• Printing (first half of the year).....		Morals and Manners....	$\frac{1}{2}$
• Writing (last half of the year).....	$2\frac{1}{2}$	Physical Exercises.....	$1\frac{1}{2}$
• Oral Instruction.....	$2\frac{1}{2}$	Opening Exercises and Recesses...	$3\frac{1}{2}$
• Drawing.....	1		
• Spelling.....	$2\frac{1}{2}$		

SECOND CLASS.

• Reading.....	8	Music.....	1
• Writing ..	2	Morals and Manners.....	$\frac{1}{2}$
• Oral Instruction.....	$2\frac{1}{2}$	Physical Exercises.....	$1\frac{1}{2}$
• Arithmetic.....	$2\frac{1}{2}$	Opening Exercises and Recesses...	$3\frac{1}{2}$
• Drawing	1		
• Spelling.....	$2\frac{1}{2}$		

THIRD CLASS.

Reading.....	8	Music.....	1
Writing.....	2	Morals and Manners....	$\frac{1}{2}$
Oral Instruction.....	2	Physical Exercises.....	$1\frac{1}{2}$
Arithmetic.....	3	Opening Exercises and Recesses...	$3\frac{1}{2}$
Drawing.....	1		
Spelling.....	$2\frac{1}{2}$		

FOURTH CLASS.

Reading.....	6	Spelling.....	$2\frac{1}{2}$
Writing.....	2	Music.....	1
Oral Instruction.....	$2\frac{1}{2}$	Morals and Manners..	$\frac{1}{2}$
Arithmetic.....	4	Physical Exercises.....	1
Language	2	Opening Exercises and Recesses...	$2\frac{1}{2}$
Drawing.....	1		

FIFTH CLASS.

Reading.....	6	Spelling.....	2½
Writing.....	2	Music.....	1
Oral Instruction.....	2½	Morals and Manners.....	½
Arithmetic.....	4	Physical Exercises.....	1
Language.....	2	Opening Exercises and Recesses...	2½
Drawing.....	1		

SIXTH CLASS.

Reading.....	6	Spelling.....	1½
Writing.....	2	Music.....	1
Oral Instruction.....	2	Morals and Manners.....	½
Arithmetic.....	4	Physical Exercises.....	1
Language.....	3	Opening Exercises and Recesses...	2½
Drawing.....	1½		

SEVENTH CLASS.

Reading.....	4	Spelling.....	1½
Writing.....	2	Music.....	1
Geography.....	4	Morals and Manners.....	½
Arithmetic.....	4	Physical Exercises.....	1
Language.....	3	Opening Exercises and Recesses...	2½
Drawing.....	1½		

EIGHTH CLASS.

Reading.....	4	Spelling.....	1
Writing.....	1½	Music.....	1
History.....	2	Morals and Manners.....	½
Oral Instruction.....	2	Physical Exercise.....	1
Arithmetic.....	4	Opening Exercises and Recesses...	2½
Language.....	4		
Drawing.....	1½		

NINTH CLASS.

Reading.....	4	Spelling.....	1
Writing and Book-keeping.....	1½	Music.....	1
History.....	3	Morals and Manners.....	½
Oral Instruction.....	2	Physical Exercises.....	1
Arithmetic.....	3	Opening Exercises and Recesses...	2½
Language.....	4		
Drawing.....	1½		

A lengthy discussion resulted in the following modifications of the plan :

1. Oral instruction in geography is to be given in the fourth and fifth classes.

2. The text-book on geography is to be required in the sixth and seventh classes.

3. The text-book on grammar is to be studied in the seventh, eighth, and ninth classes, in connection with the exercises in language.

EDITORS' DEPARTMENT.

One of the best schoolmasters in Illinois says in our May issue : "Of late there has been an evident dissatisfaction with prevailing methods of education. * * * The causes of this disaffection are numerous, and it becomes the friends of the common school to study them diligently, and contrive means to remove them." This expression deserves more than passing notice. The advice of Mr. White demands careful attention. That the greatest usefulness of the common school is to be crippled for a time, is becoming painfully evident. Some of our best and ablest men are even now unconsciously leaning towards the side of the opposition. This could not be, did not cause exist. What is the cause? First, the inefficiency of our schools. Truly, this is a poor reason for condemning the system, but it is grasped by the real enemies of the free schools, and they are too glad to be re-inforced by men who have heretofore been found in other ranks. If one finds his house is about to fall on account of poor architecture or dishonest workmanship, he at once goes about the repairing of his dwelling; he does not care to demolish the entire structure and throw away the material because it is not what he knows it ought to be; but a class of our statesmen, or better, politicians, thinking or pretending to think that the common schools are not as efficient as they should be, propose to demolish them entirely, or what is worse, to cripple them by reducing the establishment, instead of doing what they can to make them better.

The only successful means of combating this feeling against free schools on account of their so-called inefficiency, lies solely in the hands of school teachers and school officers. Our schools are not so devoid of results as some would have the public believe, and yet every earnest teacher keenly appreciates the need of improvement. The school work must be done better than ever. Every means must be used to increase the results of the few years' school work that the mass of children do. Communication is easy and free; teachers must often compare notes, must read of every improvement in school studies and in school management, must eagerly appropriate any new method that comes to their knowledge, whenever such method has been tried and found good.

A second cause of the growing disaffection lies in the unparalleled extravagance of school boards and of school directors. For this, too, teachers are to some extent responsible. In the present day, school houses and school apparatus are made to absorb thousands of dollars;

the people, at first willing to trust to those who ought to know better, vote fabulous sums for such appropriations; but as pay-day arrives, and high taxes are levied and collected, the tax-payers look in vain for the expected returns. Educating children does not give immediate results in dollars and cents; it does not immediately help pay taxes. It is then that the communities cry out against the schools, although the real cause of the trouble lies in the foolish expenditure made years before. As in the first case, no remedy now exists for this unfortunate state of affairs, but for the teachers to take matters in their own hands, and by actual work with the pupils prove beyond a doubt that the present school is a good investment. Let school and people be brought in frequent contact. Take pains to inform the community concerning what the school is doing or trying to do. Draw attention and criticism to the work, and profit by such criticism. These are some of the means that occur to us when thinking of the sentiment expressed by Mr. White.

The legislature of Illinois adjourned on May 6th, to meet in extra session Jan. 6th, 1874.

The laws enacted affecting the public school system are, happily, few. The only one which changes the school law, provides that any woman twenty-one years of age and upwards, and possessing the qualifications prescribed for men shall be eligible to any office under the general or special school laws of this State. This law goes into effect on the first of next July.

The failure to legislate upon the office of county superintendent will cause serious embarrassment. The last general assembly crippled the efficiency of the office, but as the law then made cannot go into effect until the present county superintendents' terms of office expire, the pernicious effects of the law are not yet apparent. We are now in a condition to show to the people the folly of having county superintendents of ordinary qualifications and inferior abilities. In most counties, no competent man can afford to accept the position. The few glorious exceptions are those counties where the schools have been made to prove the value of an able superintendency.

At the various State teachers' meetings held during 1872, it was resolved, recommended, etc., that this office should be made efficient, and all seemed earnest to help along the movement. When the legislature met, it was found that while one party of school men were really working for the county superintendents' bill, another were spending all their vigor in favor of compulsory education—a measure which no large number of teachers in our State ever advocated,—and a third, a fourth and a fifth were so busy riding some favorite hobby that they had no

time or powder for this important measure. These things being so, let the office be abolished at the extra session. Our public schools need no such supervision as will come from men who must devote a small part of the time to school interests, and make something else the main business. Every county in Illinois can profitably employ a man every day in the year, to look after its schools. Less time used, makes a botch of the whole matter.

The superintendent of public instruction is magnanimously (?) provided for. The following is the appropriation :

“To the superintendent of public instruction, for clerk hire, the sum of \$1,500. To the office of the superintendent of public instruction, for office rent, and other necessary expenses of said office, a sum not exceeding \$1,000 to be paid out of the State school fund.”

We feel like finding fault with the following law, although in the main it is one of deserved commendation and can be made to work unparalleled advancement in the study of natural history.

“269, Emergency—In force April 29, amends the act in relation to State Geologist so that he shall collect and preserve a full set of specimens found in this State, and he shall deliver them to the Secretary of State, who shall cause them to be properly arranged in a cabinet and kept in the state-house. The collection shall be so large as to furnish specimens to all educational institutions in the State empowered to confer degrees, to the State Normal Schools, the Industrial University of Champaign, and to all chartered institutions of science in the State which publish their proceedings.”

Why are these specimens to be distributed to “all educational institutions in the State empowered to confer degrees” only. We have two or three, to say it mildly, chartered colleges in Illinois that confer degrees or that would if they had an opportunity, where these specimens will be of little use. We are surprised that the public high schools of our cities like those of Chicago, Peoria, Bloomington, etc., should be obliged to collect or buy specimens for their museums, while the name college entitles the institution to draw from the grand museum of the State.

The school work of the legislature, then, while it gives slight cause for congratulation affords little ground for complaint. The wonder sometimes is, how our representatives do so well. The ruinous policy of our towns and villages in reckless expenditure, palatial buildings and costly furniture is now painfully apparent. Our representatives at Springfield were apt to look with distrust upon any measure that involved the expenditure of money upon schools. The friends of public education can blame themselves to some extent for this feeling. The

people are too ready to vote their money for magnificent school houses; but when pay-day approaches and taxes are high, then comes sweeping condemnations of the whole school system. Let us advocate substantial, plain edifices with comfortable, not luxurious, appointments; then perhaps some money will remain to pay for brains to run the schools.

The annual meeting of the Illinois Society of School Principals which occurs at Ottawa, July 7, presents an unusual programme. But few subjects are presented for discussion, half a day's work being allotted to each. Men who have given much thought and preparation to the subjects have prepared papers for the opening of each discussion. It is possible at such a meeting to avoid the scattering talk that is wont to take so much of the time of a pedagogues' convention. The meetings of this society have heretofore been productive of much good. There is reason to believe that the session this year will be superior in thoughtful debate to any of the preceding meetings. Look on first page for the programme.

A correspondent asks us to explain how the distance from the Earth to the Sun is found by the transit of Venus. We shall not attempt here a full explanation; but we will state a few facts that will throw some light on the subject, to any one who is familiar with the principles of Trigonometry. The *relative* distances of the Earth and Venus from the Sun may be found in several ways; and they have long been known. At the time of the transit, two observers, by taking stations far apart on the Earth's surface, will see Venus cross the Sun's disk in different apparent paths. Then, by knowing their own distance apart in miles, measuring in a straight line, together with the relative distances of Venus and the Sun, and the variation in the planet's track as seen from the two places, it can be determined how many miles on the Earth will subtend an angle of one second at the distance of the Sun. When this is known, it is then very easy to determine the Sun's distance in miles. This comes as near an explanation as we can give, using but few words, and without the help of diagrams. We would refer to Peabody's *Astronomy*, published by Wilson, Hinkle & Co., for a fuller elucidation of the subject.

We see it announced that the Unitarian Conference, at its recent meeting in Chicago, pronounced against the use of the Bible in schools. We know nothing more about the matter than we learned from a very brief report in one of the daily papers. The resolutions that were unanimously adopted were reported; and we read them with some care. As we understand those resolutions, we should have no scruple in voting for them, although we would not have brought them forward, had we been a member of that body. To us, they seem to declare merely that it is not best to *force* the Bible into the schools. This is exactly our opinion; our State law now leaves the matter exactly where it ought to be kept; that is, to each district for itself, acting through its board of directors. We are earnestly in favor of the Bible in

school; we have serious doubt if we would undertake to teach a school in which its use was forbidden; but we hope the time will never come when the *legal* aspect of the case will be different from what it now is. We judge, however, from the brief reports of the speeches on the occasion, that the action was intended to mean more, and worse, than we can draw from the language of the resolutions. Eminent men like Dr. Bellows, and James Freeman Clarke, were present, and spoke on the question; and it would seem that their remarks took strong ground *against* the Bible in the public school. If it was so, we are ashamed of them; they would have acted more in accordance with their profession, if they had raised a handsome fund to be expended in circulating, as a tract much needed now, the excellent pamphlet, "The Bible in Schools," prepared by their denominational brother, Rev. A. D. Mayo lately of Cincinnati.

By the death of Chief Justice Chase, we lose the last possessor of *brains* in President Lincoln's war cabinet. Seward, Stanton, Chase,—a trio of able and noble men, each specially fitted for the work given him in those trying times,—have now followed their chief to the unknown land. Although but twelve years have passed since that terrible struggle began, a majority of the most prominent men on both sides have gone to their rest. Truly, our life is but as a vapor.

Elihu Burritt, the "Learned Blacksmith," lately published an article in the *Christian Union*, which serves to illustrate that an eminent man, a *learned* man, may be a big fool, after all. It is entitled, "The Attenuation of Suffrage in the United States." He finds fault, at first, with the custom of increasing the ratio of representation at each taking of the census. He says, that in starting off with about one representative to every fourteen thousand people, we were "the truest and completest representative government in the world." Now, the same ratio of representation to-day would make the Lower House contain two thousand seven hundred and fifty members! We ask if it is possible for Mr. Burritt to suppose that legislation would be the better, if carried on in such an unwieldy body as that? Would there be less likelihood of "back-pay steals"? And would such a steal oppress us any the less?

But even this view of the case does not move Mr. Burritt's "learned" and wise soul so much as the fact that the senators and the president are not directly elected by the people. Hear him: "But to elect the governor and senators of the nation by a direct vote! to allow its millions to put these great officers of state, with their own ungloved hands, into their high positions! '*Procul, O procul este, profani!*'" says our constitution at the door of the White House, or a congress, with as deep a sense of propriety as any priest of pagan Rome ever said it to the impious intruders at his temple door." This is all very fine, no doubt; but it would better become a six-by-eight demagogue, addressing a crowd of the unwashed, from a stump or the top of a beer-barrel, than a "learned" man soberly writing for a religious paper. Does not he know that the senate and the president were intended from the first to represent the *States*, and not the people directly?

Again, he is disturbed because the senators are not elected as often as the representatives; and, because the senate and not the house share the treaty-making power with the president. Wiser heads than his, on the contrary, see danger from the present tendency of the lower house to exercise too much power, not too little—to say nothing of the excellent reason, from the fundamental idea of our government, why the confirmation of treaties should belong to the senate alone. Other things trouble him, but the burden of his song is that the people cannot make themselves felt, in mass, forcibly and directly enough; there are too many “checks and balances.” He seems to desire the obliteration of State lines, that all officers should be chosen directly by popular vote, at periods not exceeding two years, that the clamor or vote of the people at any time shall have full power to make treaties, to declare war, or to change the whole government completely. Imagine how this would have worked at the time of the “Trent affair,” to take one instance from scores that might be adduced. Seriously, we think, Mr. Burritt had better go to France with his “learning.” They need some new theories in that country; and his might suit the genius of that people; he might become a leading “citizen” in the Commune.

An experiment in education is to be tried in Massachusetts this summer, that will be watched with a great deal of interest. Prof. Agassiz has long felt that, before natural science can be taught in the schools as it ought to be taught, the teachers must be trained to study Nature, and not merely to read about Nature in books. He has started a plan for a Normal School in natural science, to be held during the summer vacation. It was intended at first to hold the session in Nantucket; but the munificent gift of Mr. John Anderson, a rich tobaccoist of New York, has changed all that. For several years, Mr. Anderson has made his summer home on Penikese island, one of the Elizabeth group, a few miles from the main land. The island contains about 100 acres and, with the improvements that have been made by Mr. Anderson at great cost, is worth about \$100,000; this, with \$50,000 in cash, he gives to the great naturalist for his school. During the session this summer, Prof. Agassiz will be aided by such men as Dr. Burt G. Wilder, of Cornell; Prof. Spencer F. Baird, Prof. Joseph Lovering, Prof. Wolcott Gibbs and others. Twenty one topics of study are announced; we have no statement concerning terms of admission.

Hon. B. G. Northrop, the able Superintendent of Public Instruction in Conn., and President of the National Teachers' Association, has taken in hand a growing evil, with a determined purpose to check it if possible. We refer to the practice of sending our American youth to Europe for their education. He has begun by the publication of an able, and rather startling, article on the subject, in the *Christian Union*. He proposes to follow up the work, and in this he is aided by some of the most eminent friends of education in the country, including president Eliot of Harvard. We do not understand that his work has reference to men of some nativity and culture, college graduates and others, who go to pursue extended studies in the Universities, but rather to quite young persons who go to Europe for early training in the

public schools, or, worse still, in the boarding schools. Mr. Northrop, by his long connection with educational affairs in this country, by his extensive acquaintance, and his personal observation of the schools of which he speaks, is eminently qualified for the work he has undertaken.

The movement seems to attract considerable attention and comment. The *Watchman and Reflector* for May 8th, has an able editorial commending Mr. Northrop's course. We see that President Jackson of Trinity College is to discuss the subject at the meeting of the National Association at Elmira, next August. Mr. Northrop's article shows that, for the mere purpose of intellectual drill and acquisition, our own institutions are better suited to the wants of our youth than those they will find in France or Prussia. While, in respect to the training that shall fit them for American citizenship, he uses the following sensible and convincing language: "The juvenile mind, pliant and docile, yields to surrounding associations. Political freedom favors individual independence and manliness. Our youth should therefore be educated as Americans, and be well grounded in American ideas and principles. In the knowledge of men and things, in courage and aspiration, in push and energy, in solid utility, in the adaptation of means to ends, Americanism means more than Germanism or any other nationalism.

We are glad he has taken hold of this matter; and wish him "God speed," assistance, and the most abundant success."

Arithmetical Problem for the Boys and Girls.—A boy sells 30 apples at the rate of 2 for a cent, and 30 more at the rate of 3 for a cent, and receives 25 cents; the next day, he sells 60 apples at the rate of 5 for 2 cents, and receives but 24 cents. Show clearly why there is this difference.

EDUCATIONAL INTELLIGENCE.

The following, from the New York Journal, is exactly what the SCHOOLMASTER wishes to say:

"We desire to make a specialty of State news; and, to be successful in this, it is only necessary that each of our subscribers should take pains to inform us of whatever is of interest, educationally, in his own vicinity. We shall be obliged to depend largely upon our subscribers for local information, and would thank any one to favor us with news as above mentioned. Any change in school principals, within the State or between this and other States, improvements in town or city school buildings, meetings of teachers' associations or institutes, movements of prominent educational men, and other items of like character, will be gladly noticed."

OHIO.—WILLIAM H. MCGUFFEY, D. D., LL. D., whose name is familiar to almost every school child in the West, and with whom many of our older readers had a personal acquaintance during his long residence in Ohio, died at Charlottesville, Va., on Sunday evening, May 4th. He was born in Washington County, Pa., in the year 1800 and received only the fair education which the means of his father, a Scotch Presbyterian farm-

er, could allow him. While WILLIAM was still a child the family removed still further from the centers of civilization to Trumbull County, Ohio, taking up their abode in a log cabin, which stood in the midst of a wilderness. The boy worked hard on the backwoods farm, but diligently employed in study all the time which he could save from outdoor toil. He read all the books he could borrow, and received a little occasional instruction from a clergyman. At eighteen he began the study of Latin with borrowed books, walking several miles to recite to his ministerial friend.

His father was too poor to help him, and the young man supported himself as a teacher until he could be fitted for college. He graduated at Washington College, Pa., in 1825, under the presidency of ANDREW WYLIE, D. D. Immediately after graduation, so good was the reputation of the young collegiate, he was appointed Professor of Ancient Languages in Miami University, and in 1832 was transferred to the chair of Moral Philosophy in the same institution. In the meantime (1829), he was called to the Presbyterian ministry, and preached during the remainder of his life, though he rarely had any pastoral charge. In 1836 he was elected President of the Cincinnati College, remaining in that position until 1839. In the latter year he accepted the presidency of the Ohio University at Athens, where he remained until 1845, when he assumed the duties of Professor of Moral Philosophy and Political Economy in the University of Virginia. He remained in connection with that institution until his death, working zealously and ably until disease interrupted his labors.

In Ministerial as well as educational duties he was indefatigable. The churches and schools of Ohio, Indiana, Pennsylvania, and Virginia will long remember his name with gratitude. That he was no mere educational theorist has been signally evidenced by the wide circulation and long popularity of his "Eclectic Series" of readers.

DR. MCGUFFEY was one of those hard working, clear headed, and thoroughly practical men, whose abilities are directed by a devout purpose to do good. His death will be sincerely regretted by all who knew the man and appreciated his sterling worth.—*Cin. Gazette*.

MASSACHUSETTS.—A meeting was held in Boston, a few evenings since, to form a society for promoting the study of the Irish language. This object is to be attained by establishing several private schools where the Erse tongue shall be taught. The rapidly obsolescent vernacular of the Green isle is abundantly worth preserving, for its own sake, and for the sake of the literature that it enshrines. It can scarcely become a classic, in the sense that Latin and Greek are classics; but both it and the Cimric of Wales should be protected against the fate that befell the old Sanscrit.

MISSOURI.—On Sunday, the 30th ultimo, St. Louis lost one of the most promising in her corps of teachers, and the profession a member who honored its name by accurate scholarship and varied accomplishments. Joseph Leavitt Sanborn had not yet completed his thirtieth year at the time of his death. He had only recently come to the West, but had won the respect and regard of a wide circle of friends by his uprightness, sense of honor, and modesty. He was always self-poised and genial. In his school he was accurate and painstaking, and yet had nothing of the nature of pedantry about him. Of late years he had won an enviable reputation as a writer for periodicals. Our readers will recall the brilliant paper on Whittier from his pen, printed in this journal during the present year. He wrote for the *New York Nation* and the *Independent*, also for the

Hearth and Home, the *Springfield Republican*, (of which his brother, F. B. Sanborn, is the accomplished and widely-known literary editor), and the *Kansas Magazine*, and other educational journals.

In late years, we understand that his health was not firm—not, indeed, since he gave up his farm life in New Hampshire, and commenced the course of severe study, which gave him the second rank in his class on graduation at Harvard College in 1867. He had scarcely the strength to withstand the enervating influences of the spring climate at the West, and when attacked by that much dreaded disease, the *cerebro-spinal meningitis*, his constitution gave way.

His remains will rest in Hampton Falls, New Hampshire, where the family mansion is situated, which has been the home of a long line of ancestors, numbered among the most respectable citizens in that State. The first of his lineage in this country, Rev. Stephen Bachelder, is mentioned in the early records of many a town along the coast of New Hampshire and Maine—a man of dauntless courage and enterprise, even at an extremely advanced age. If we are rightly informed, Daniel Webster, as well as the poet Whittier, traced their descent from this stern Puritan.

The blow falls heavily on a bereaved wife and infant child. In our community, too, where so much is to be done, and there are so few able to fill the higher positions, the loss of such men as Mr. Sanborn is very disheartening.

We may inscribe here, appropriately, the words that stand written over the grave of Fichte, in Berlin:—"The teachers shall shine as the brightness of the Firmament, and they that turn many to righteousness, as the stars, forever, and ever."

W. T. HARRIS, IN *The Western*.

ILLINOIS.—In a very large number of counties, prolonged institutes, or Normal drills, are to be held during the coming vacation. A drill of this kind, six weeks in length is announced for Macoupin county; one, of seven weeks for Whiteside, one of two weeks for Putnam,—these, in addition to those we have announced already. In several other counties, such a project is on foot; but, either the arrangements are not complete, or the result has not yet come to our ears. We are glad to make these announcements; much good will come from these gatherings. We wish that, in a great many cases, they might grow into regular, organized county Normal Schools, such as the law provides for, and such as ought to be established in almost, if not quite, every county of the State. We are quite sure that in many counties they can be established very speedily, if the teachers and friends of public schools will (earnestly, and *wisely*) urge the matter upon the Boards of Supervisors.

PROFESSOR WM. M. BAKER, of the Illinois Industrial University is dead. His health had been failing since September, 1872, when he was prostrated by constant attention given at the bedsides of his wife and other members of his family, but no serious results were anticipated, he vainly endeavoring for months to keep up his class work. In January he finally gave up, with the intention of visiting friends and recruiting strength, neither of which he was destined to do. A congestive chill, quickly followed by other forms of disease, gave from this time alternations of hope and fear, terminating by death, Wednesday, April 16th, 1873. Among his last words were, "Life is sweet, but I have reached the limits of earth and my mind readily adjusts itself to the change."

Born in Phillipsburg, Me., July 4th, 1823, he passed the first twelve years of his life at this place, giving such aid as he could in his father's grist-mill, then four years cutting, hauling and rafting logs, on the Matamuscontis river. His school advantages had been very limited; but, blest with an intelligent mother and an earnest desire for an education, he was so forward in his studies at sixteen that in one year he prepared to enter college. Latin he learned while cutting shingles. With a scanty wardrobe and just a half-dollar in his pocket, he walked the forty miles that lay between him and the college door at Waterville, and working his way at anything that came to his hand, he passed here his Freshman year, and the other three at Bowdoin, graduating at the head of his class. He afterward studied Theology one year at Bangor, then for want of means taught school at Hampden one year. In the mean time he decided that teaching, not preaching, was his calling and from that time gave his life to education. We find him engaged as a teacher at Lewisburg, and in the Putnam free school at Newburyport, Mass. In 1857, he settled at Quincy, Ill., and organized a classical high-school which was quite successful, and was rapidly gaining when the civil-war broke out, and Mr. Baker became Chaplain of the 97th Ill. Volunteers. Three years after, he entered the office of Hon. Newton Bateman, Superintendent of Public Instruction, for Illinois; then was Principal of the Springfield high-school, and in 1868, became Professor of English language and literature in the Industrial University at Urbana, Ill., being the first teacher, after the Regent, employed. Here he strove earnestly and successfully in establishing an English course of three years, that compares favorably in culture and interest with the usual courses of Latin and Greek. This was his aim, to this he gave his entire attention, for this he labored day and night, reading, writing, thinking. Language was his choice among studies, as student and teacher, being well acquainted with Hebrew, Greek and Latin; with French, German, Italian and Spanish. In late years Anglo-Saxon received prominently his attention. As a teacher he was always efficient and popular; as a preacher in the Congregational church easy and eloquent; as a christian man, and companion and neighbor, always consistent, full of good nature and good will. Home and friends were dear names to him, and these he had. The former was ever sunny and pleasant, the latter numerous and cordial. His memory is cherished by very many, and among the number there are long lists of grateful pupils who will never forget his cheering voice and wise counsels.

He leaves as chief mourners, a wife and three daughters, the eldest of whom is just gaining womanhood.

Schuyler County.—We very deeply regret the necessity that has compelled the resignation of Mr. Coyner, the efficient superintendent of our union school. But, however much we desire his continuance, we know it would be suicidal for him to remain and could not insist upon it under the circumstances.

Our school has reached its highest excellence under his management, aided by a corps of able assistants.

It is his purpose to travel considerably, attending to outside business, but his family will make their home in Rushville for the present.

The board of education appointed a committee to confer with Mr. Coyner, hoping to make such arrangements as would influence him to withdraw his resignation. Failing in this, they decided to close the schools for the summer.

REPORT OF ATTENDANCE FOR APRIL, 1873.

	No Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or tardy.	SUPERINTENDENTS.
Cincinnati, O.....	26,545	25	21,067	19,937	94-6	5,259	.....	John Hancock.
Evansville, Ind.....	4,272	20	3,405	3,105	91-5	1,180	179	Alex. M. Gow.
Terre Haute, Ind.....	2,453	20	2,158	1,934	90	986	473	Wm. H. Wiley.
West and South } Rockford, Ill., }	1,129	20	1,005	895	89	236	209	{ J. H. Blodgett. O. F. Barbour.
Danville, Ill.....	1,117	20	988	852	86-3	282	131	J. G. Shedd.
Macomb, Ill.....	639	20	598	578	96-6	47	361	Matthew Andrews.
East Denver, Colorado.	750	22	603	524	86-8	573	107	F. C. Garbutt.
Decatur, Ill.....	1,505	20	1,439	1,325	92-2	191	538	E. A. Gastman.
Marshalltown, Iowa....	625	20	566	541	95-5	81	323	Chas. Robinson.
Cedar Falls, Iowa.....	651	20	622	562	90-4	262	246	J. K. Sweeney.
Shelbyville, Ill.....	528	20	468	407	87	159	123	Jephthah Hobbs.
Polo, Ill.....	455	20	426	402	93-9	14	181	J. H. Freeman.
Rock Island, Ill.....	1,257	20	1,074	998	93	68	528	I. S. Everett.
Winchester, Ill.....	.....	20	120	.....	.....	.....	268	Henry Higgins
Edwardsville, Ill.....	425	20	345	297	86	14	147	H. H. Keebler.
Marengo, Iowa.....	422	20	392	372	94-9	46	219	C. P. Rogers.
Sandwich, Ill.....	387	20	352	333	91-9	61	130	Harry Moore.
East Mendota, Ill.....	370	18	333	316	94-8	69	111	J. R. McGregor.
Freeport, Ill.....	.....	20	1,191	1,115	93-7	268	.....	Charles C. Snyder.
Rochelle, Ill.....	376	20	319	310	97	24	184	P. R. Walker.
Normal, Ill.....	333	15	312	289	93	56	135	Aaron Gove.
Albia, Iowa.....	3-2	20	298	282	94-6	24	124	Cyrus Cook.
Escanaba, Michigan.....	264	20	219	200	91	93	80	N. E. Leach.
Belvidere, Ill.....	262	18	254	245	96	9	178	H. J. Sherrill.
DeKalb, Ill.....	235	23	210	2-3	93	63	51	Etta S. Dunbar.
Toledo, Iowa.....	228	20	212	200	94-3	49	65	A. H. Sterrett.
Lincoln, Ill.....	1,134	20	695	618	87-7	359	360	J. Wilkinson.
Sheffield, Ill.....	224	18	196	178	90-8	23	65	J. A. Mercer.
South Belvidere, Ill.....	324	20	298	285	95-6	75	144	J. W. Gibson.
Altona, Ill.....	200	16	183	162	88-5	78	115	J. H. Stickney.
Yates City.....	189	24	169	160	95	103	81	A. C. Bloomer.
Maroa, Ill.....	165	22	129	112	87	55	40	Jas. Kirk.
Lyndon, Ill.....	138	15	126	109	90	23	56	O. M. Crary.
Ridott, Ill.....	112	20	82	78	96-7	3	46	C. W. Moore.
Knoxville, Ill.....	317	19	288	271	94-2	.....	50	M. H. Ambrose.
Blue Island, Ill.....	215	20	210	199	95	13	14	S. M. Seymour.
Heyworth, Ill.....	146	22	114	104	91-3	86	22	J. E. Jewett.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

Cook County.—Mr. D. S. Wentworth, principal of the Cook county Normal school, has arranged a course of three lectures to be delivered before the students of that institution during the present summer term. The first lecture of the course was given by Horace B. Stebbins on "Scholarship." The second lecture will be delivered during the month of May by J. F. Mack, on "Pebbles," to be an ollapodrida of various scientific topics, and the third by Geo. B. Armstrong during the month of June, on "Polite Literature."

Mason County.—We notice the names of S. M. Badger and S. A. Murdoch announced as candidates for the office of county superintendent, subject to the decision of the democratic county convention.

The grammar and high-school departments of the public schools of Mason City have adopted one session per day: from 9 o'clock A. M. to 2 o'clock P. M. The plan was proposed by the pupils in these departments, and but three families objected, so the directors ordered it to be so.

Carroll County.—Teachers' Institute was held at Thomson, J. E. Millard, county superintendent and Mr. F. M. Hicks, of Thomson, conducted exercises in Botany and Physiology. An evening lecture was given by Mr. Millard. Miss S. Bristoe was the Secretary.

The citizens of Thomson and vicinity were finely entertained by the pupils of the advanced department of the public school, consisting of select readings, and singing under the supervision of Prof. Hicks, assisted by Mr. A. O. Williams and Miss Sadie Loncore. The selections were quite numerous, both in the reading and singing and gave evidence of good taste displayed in their selection. The scholars all did well and we will venture to say that they are in good hands. We are quite anxious that more of these kind of entertainments should follow. They not only give encouragement to the pupils, but afford the parents a great deal of satisfaction, in judging for themselves as to the improvement of their children.

Rock Island County.—The city of Moline is to build two school-houses the present year; one, a two-story brick building, with basement, containing eight rooms, on the site to be purchased in the western part of the city, at a cost exclusive of site not exceeding \$14,000; and the other, a three-story brick building, with basement, containing twelve school rooms, on the old site, the building to be paid for out of the insurance money received for the house burned last September. This will necessitate the issuing of bonds not to exceed \$20,000 in amount, at such rates of interest not exceeding ten per cent. per annum, and for such denominations, not of less than \$1,000 each, as the directors may deem necessary.

Pike County.—A Teachers' School will be held in the high-school building of this place, commencing the 7th of July next, and continuing nine weeks. The object of this school is to prepare teachers to meet the requirements of the new school law.

Instruction will be given in natural philosophy, physiology, botany, zoology, and the theory and practice of teaching.

No pains will be spared to make the course of instruction as thorough and practical as circumstances will admit.

Tuition will be \$6 for entire course. For any information pertaining to said school, please address, J. N. DEWELL, Co. Sup't of Schools.

Montgomery County.—Hillsboro—The public school for the present year, under the principalship of Mr. J. M. Dickson, will close next Friday. We do not think it detracting from the good work done by his predecessor, to say that Mr. Dickson has done more than any other teacher to make the school a success and to raise the grade very materially. Of course there have been growings and fault-findings, but coming from the source which most of them do, they remind us that the *successful* teacher, like the best tree in the orchard, is known by the large number of clubs lying around which are used to bring down the fruit. Mr. Dickson has done a good work for us in the past, and with an able corps of assistants the ensuing year, will place Hillsboro' far up towards the head of the list of the good schools of Southern Illinois. There is no reason why we should not have as good as the best schools, and we can have, if our people will give it their support. In the year to come, then, let us improve every opportunity to advance the public school of our city.—*News Letter.*

Edgar County.—The meeting of the Teachers' Association was a decided success. Over one hundred and thirty teachers were present and engaged in the exercises with enthusiasm. The exercises consisted chiefly of class work, illustrating methods of instruction in the various common-school branches. Discussions, essays and readings were engaged in with a *vim*. The exercises were the home made article, but none the less interesting and instructive. All present were well satisfied, and the whole affair will give an impulse to educational interests in the county.

The association adopted resolutions expressing the unanimous conviction that the schools of Edgar county are now in a more prosperous condition than ever before—that their welfare is largely due to the efficient superintendent, and deploring all attempts to abolish the office of county superintendent.—*Gazette*.

The following are the resolutions:

Resolved, That we have had in this meeting of the Teachers' Association with its numerous exercises, a rich treat.

Resolved, That in our judgment the schools of this county are now in a more prosperous condition than at any previous time.

Resolved, That we believe the efficiency of the schools is largely due to the efficient superintendent and that the office of county superintendent ought not to be abolished.

Resolved, That we are in favor of practical teachers only for the office of county superintendent.

Whiteside County—H. P. French, formerly assistant in the Princeton high-school, and for three years past principal of school in Sterling, is about to leave teaching to engage in school furniture business, at Albany, N. Y.

Will County.—Plainfield College in Will county, was totally destroyed by fire on the evening of April 15th. Loss about \$12,000; the fire is thought to have been the work of an incendiary.

Macon County.—The following list of topics, used at a recent examination, is merely a sample of those used from time to time. The topics are written upon the black board, and the candidates, if several, are all required to write on the same set of topics at the same time. In orthography the words are pronounced; and in addition to the written work in reading, an oral exercise is had on the elementary sounds.

To many, the standard, considering the character of the topics, will appear exceedingly low, but it has proved sufficiently high for Macon county—at times, too high. In fact it is not an uncommon thing for applicants to fall below this very low standard, though coming characterized as *old teachers*, and bringing certificates of the highest grades from ordeals in which fearfully long lists of abstruse and puzzling questions were employed.

OSCAR F. McKIM, Co. Supt.

DECATUR, ILL., May 3d, 1873.

1. Except in orthography, reading, and penmanship, the work may be done with pencil.

2. To merit a certificate, Candidates are required to produce at least 60 per cent of correct work in each branch. Where 80 per cent is the lowest, a certificate of *First Grade* will be given. No provisional certificate will be issued unless an actual scarcity of teachers exists in the county.

3. In examining the papers, the spelling, the use of capitals and periods, the construction of the sentences, and the general appearance of the work will be taken into consideration.

ORTHOGRAPHY.—1. Discipline. 2. Reference. 3. Croquet. 4. Mucilage.

5. Paralysis. 6. Wednesday. 7. Difference. 8. Separate. 9. Salaratus. 10. Bulwark. 11. Amateur. 12. Rheumatism. 13. Taciturn. 14. Kerosene. 15. Privilege. 16. Ephemeral. 17. Tennessee. 18. Symptom. 19. Cemetery. 20. Insipid. 21. Vigilant. 22. Connecticut. 23. Isthmus. 24. Avordupois. 25. License

READING.—Time 30 minutes.—1. Define *reading, emphasis, accent, inflection.*

2. How many elementary sounds in our language? How are they classified?

3. What can you say of the sentiment expressed in the piece of which the following is the initial stanza? What of the reading to indicate that sentiment? Which are the emphatic words? Define the words marked with the dagger. (†)

"Come to the †festal board to-night,
For bright-eyed beauty will be there.
Her †coral lips in †nectar steeped,
And †garlanded her hair."

PENMANSHIP.—1. With what system are you familiar? Make and name the elements or principles employed.

2. Write, without joining, all the small letters of the alphabet.

3. Write the following copy three times:—

"Thou, too, sail on, O ship of State!"

GRAMMAR.—Time 45 minutes.—1. Define *English grammar, letter, syllable, word, common noun, gender, voice.*

2. Write the plurals of *echo, mouse, analysis, ox, knife, penny, genus, a, h, s.*

3. Write the declension, in both numbers, of *man, lady, than, she, fly.*

4. Analyze the following sentence, and parse the italicised words:

"A desire to see his face once more induced us to attempt the journey."

5. Correct the following sentences where incorrect, and give reasons:

It was him who I saw.
He is taller than me.
Each horseman put their lance in rest.
We bought some of them french vases.

GEOGRAPHY.—Time 45 minutes.—1. Name the principal rivers in each of the four Middle States; describe the course and tell into what each flows.

2. Name all the seas, gulfs, bays and straits, on the south and west of Europe.

3. Name and locate five of the highest mountain peaks in the world.

4. Tell what and where are the following:

Taurus, Venice, Mohawk, Madagascar, Nevada, Marmora, Alaska, Caraccas, Corea.

5. What can you say of the Gulf Stream?

ARITHMETIC.—Time 55 minutes.—1. Define least common multiple, and greatest common divisor.

2. Add 647 hundred-thousandths,

647 millionths,

4056 hundred-thousandths,

4056 millionths,

32453 hundred-thousandths,

and divide the result by 16 ten-thousandths.

3. Reduce 7-11ths of a mile to integers.

4. A drover bought cattle for \$65 per head and sold them for \$84.50. What was his gain per cent?

5. Find the interest of \$3008.75 from July 8, 1868 to June 28, 1872, at 5 per cent.

6. If $4\frac{7}{10}$ ths yards of cloth cost $23\frac{28}{100}$ ths dollars, how much cloth can be purchased for $9\frac{16}{100}$ ths dollars?

U. S. HISTORY.—Time 45 minutes.—1. Whence came each of the following, and for what particular thing distinguished? De Soto? Sebastian Cabot? Magellan? Cartier? Verrazzani? Raleigh?

2. By whom, and at what points, was Connecticut first settled?

3. Give as many as you can of the names of persons connected with the settlement at Jamestown. Also, at Plymouth.

4. What can you say of Washington's military career prior to the Revolution.

5. What occurred at each of the following dates? 1607; 1776; 1789; 1643; 1565; 1863; 1620.

ZOOLOGY.—Time 45 minutes.—1. Name the four branches of the animal kingdom, and tell the leading characteristics of each.

2. Name the orders of the class of mammals, and after each order write the name of a familiar animal belonging to the order.

3. What can you say of the Rodentia? Name 5 animals belonging to this order.

4. Why are insects so called? What can you say of their breathing apparatus?

5. Give an account of the transformation of the butterfly.

BOTANY.—Time 45 minutes.—1. What do the leaves of a plant do? Name the parts of a leaf.

2. What is an exogenous plant? How do the leaves differ from the leaves of an endogenous plant?

3. How are plants classified according to size and duration?

4. Name two or three plants, and tell in what way they are useful to man.

5. Name all the parts of a flower and tell which are essential.

NAT. PHILOSOPHY.—Time 45 minutes.—1. Of what does natural philosophy treat?

2. Name the general properties of matter, and define any two of them.

3. Mention five familiar illustrations of capillary attraction.

4. What is meant by weight? Where about the earth would a body have no weight? Why?

5. What is the weight or pressure of the atmosphere? How determined?

PHYSIOLOGY AND HYGIENE.—Time 45 minutes.—Of what does physiology treat? hygiene?

2. Trace a particle of food till it becomes blood, naming all the organs passed.

3. Give technical, also common, names of any ten bones in the human frame.

4. What is the proper temperature for a church or school-room?

5. How is air effective by being breathed? What are some of the effects of re-breathing air, as is frequently done in poorly ventilated rooms?

McDonough County.—Mr. M. Andrews, superintendent of the public schools of Macomb, has made an admirable report of the schools under his charge for the year ending March 31, 1873. He gives the attendance and punctuality for each month. The per cent. of attendance is remarkable. For seven out of the ten months it was more than ninety-five. He had a total enrollment of 845. The cost per pupil on the whole number belonging, was \$14.23. After giving a great amount of interesting information Mr. Andrews' report concludes thus:

" 1. In the employment of teachers, the nature of the work to be done should determine the character of the one employed to do it.

2. It is as necessary to secure disciplinarians as instructors in your schools.

3. Change the time for commencing the school year to the first of July.

4. A more lively interest in the success of the school, on the part of parents

5. The necessity of an increased, and an increasing healthy, public sentiment on the subject of higher education.

Another year of school work has left its impress on the minds of the rising generation. I have tried to direct the forces of the school so that these impressions might be right. The past cannot be recalled; the toil of the future is before us. Encouraged by your counsels and sustained by a corps of earnest teachers, I enter upon the new school year with increased interest in my work."

PERSONAL.—From the proceedings of the sixth annual session of the American Railway Master Mechanics' Association, which convened in Baltimore on Tuesday, we clip the following testimonial to the talents of a member of the Normal faculty: "A resolution was adopted acknowledging the services of Prof J. A. Sewall, of the Illinois Normal University, in analyzing water, and providing for his compensation."

[CIRCULAR—27.]

DEPARTMENT OF PUBLIC INSTRUCTION.

SUPERINTENDENT'S OFFICE,
SPRINGFIELD, ILL., May 12, 1873. }

CONSTRUCTION OF SECTION 33.

The first five clauses of this section prescribe the conditions upon which, and upon which alone, the boundary lines of existing school districts can be altered, and new districts established.

First Clause.—This clause applies to districts lying wholly within the limits of the same congressional township. Under this clause new districts can be established, either by division or consolidation, and any desired changes can be made in the boundary lines of existing districts, upon compliance with the prescribed condition. That condition is, a written petition, signed by a majority of all the legal voters resident in each of the districts affected by the proposed change. This condition applies both to the establishment of new districts, and to the alteration of boundary lines, merely. The petition must be filed with the Board of Trustees on or before the day of a stated semi-annual meeting. New districts cannot be established, nor boundary lines changed, except at a regular meeting of the Board.

If it is proposed, for instance, to take a portion of territory from one district and attach it to another, *two* districts are affected by the proposed change of boundary lines, namely, the district from which the territory is to be taken, and the one to which said territory is to be added; hence, in that case, the petition must be signed by a majority of all the legal voters in each of said districts. If, for example, there are thirty voters in one district and twenty in the other, the petition must be signed by at least sixteen of the former and eleven of the latter. It will not do to have petition signed merely by a majority of the *aggregate* number of voters in the two districts, without regard to the separate districts; for in that case the will of one of the districts might be ignored entirely. Thus, in the supposed case: the aggregate number of voters in both districts is fifty, of which number twenty-six is a majority; and the twenty-six might consist of twenty from one district and six from the other, or twenty-five from one district and one from the other, or even the whole twenty-six signers might be from one district and none from the other, etc. It must be distinctly understood, therefore, that no action can be had under this clause, in any case, without a petition signed by a clear majority of the legal voters resident in *each one* of the several districts concerned.

When two or more districts are concerned it will be best to have a *separate* petition from *each* district, rather than for all the names to be on the same paper; each list of names can in this way be more readily examined and compared with the whole number of voters in the district. For the same reason, even if all the names are on the same paper, those from each district should be placed in order by themselves, and not mixed indiscriminately with those from other districts. The same rules are to be observed whether the petition is for the establishment of new districts, or only for the alteration of boundaries, without increasing or diminishing the number of districts.

A new district can be made in three ways, and only three, viz: by making two districts out of one; by taking a portion of territory from each of two or more contiguous districts; and by consolidating two or more adjacent districts. This clause applies to each of these three classes of cases, and to all the particular cases that can arise thereunder. If a single district is to be divided, making two new ones, it is only necessary to file a petition signed by a majority of the legal voters of said single district, because it is the *only* district "affected by the proposed change."

Second Clause—This clause merely extends the provisions of the first clause to contiguous territory lying partly in two or more different townships, and all that has been said in respect to the former, applies equally to the latter, and the only difference is that in proceedings had under this second clause, each Board of Trustees concerned must concur therein. This clause not only authorizes the forming of districts out of the territory of adjacent townships, but also any and all alterations of boundaries, affecting two or more townships.

In proceedings had under this clause a copy of the petition or petitions must be filed with each of the several Boards of Trustees concerned, on or before the day of the regular semi-annual meeting, as in proceedings had under the first clause.

Third Clause—The object of this clause is to protect the rights of minorities in school districts. It sometimes happens that a few families in a district are left without suitable school accommodations by reason of the unfair action, or the refusal to act, of the majority. This most frequently occurs where the mass of the population is at or near one side or corner of the district, or in a village or town; the interests and convenience of which are consulted to the neglect of the few who reside in remote parts of the district. Nor are instances wanting where the same wrong is caused by local strife and jealousies, by mercenary motives, or even by sheer perversity and obstinacy on the part of the majority. It was so under the old law, and it will continue to be so. In not a few cases small clusters of families have been practically deprived entirely of the means of educating their children, by reason of the remoteness or inaccessibility of the school house, and the refusal or inability of the Board of Trustees or of directors, or of the majority of the inhabitants, to grant redress. The extent and purpose of this third clause is to afford relief in such cases—it has no other object. In the great majority of cases the rights and interests of all parties can be secured under the provisions of the first and second clauses, but cases of emergency and of peculiar hardship will nevertheless arise, when no help can be obtained from a willful, perverse or selfish majority, and it was for the express benefit of such cases that this third clause was inserted by the legislature.

Two modes of relief, and two only, are afforded by this third clause of the 33d Section, viz: 1. By the formation of a new district, and, 2. By attachment to another contiguous district. The provisions of the clause, in each case, are to be construed and applied as follows:

1. Upon petition of all the voters in any given territory, whether that territory lies wholly in the same township or partly in different townships, and whether it lies entirely in the same district, or partly in different districts, setting forth that they are not now properly accommodated with school privileges, but will be by being set off and formed into a new district—then the proper board or boards of trustees must grant the request of the petitioners. *Provided*, that not less than five families reside within said territory, and that none of said territory lies within a district that has a bonded debt, and that no boundary line of the proposed new district comes nearer than one mile (in a straight line) to any school house already built. In this case the remedy is within the absolute control of the petitioners.

2. Upon petition of all the voters in any like territory, alleging that they are not now properly accommodated with school privileges, but will be by being detached from the district or districts to which they now belong and attached to another designated contiguous district, whether such other district lies in the same township or in a different township; and upon the consenting petition of a majority of the voters in such other district—then the prayer of said petitioners must be granted by the proper board or boards of trustees, subject only to the aforesaid conditions as to bonded debt, boundary lines and number of families.

The right to relief under this 3d clause is conditional upon the petition therefor being signed by *all* the voters in the given territory. This language must be literally construed—every legal voter resident in the territory designated in the petition must actually sign said petition, otherwise the trustees may refuse to grant the desired favor. The object of the clause being to provide for special and exceptional cases, as already stated, and the privilege conferred being somewhat liable to abuse, all of its terms and provisions should and must be strictly construed. When, therefore, a petition for a new district is laid before the trustees under this 3d clause of Section 33, the questions to be considered by the trustees are the following: *First*, do at least five families reside in the designated territory? *Second*, is the petition signed by all the legal voters in that territory? *Third*, has the district, or districts, from which the petitioners desire to be severed, a bonded debt? *Fourth*, does any boundary line of the proposed new district come nearer than one mile, in a straight line, to any school house now built? If the trustees find that all the requirements of the law have been complied with upon each and all of these points, they must set off the petitioners into a new district, as desired; but if they find that the requirements of the law have not been complied with in respect to any one of those points, they can not establish the new district. If the petitioners desire to be added to another district, the trustees must be satisfied in addition to the before mentioned points, that the petition from such other district is signed by a majority of the legal voters thereon.

All persons who shall be legal voters in their respective districts upon the day of the regular meeting of the trustees, must be counted in determining whether the requisite number of voters have signed any petition on which Boards of Trustees are required to act under these clauses. Every male citizen of the United States, above the age of twenty-one years, who has resided in this State one year, in the County ninety days, and in the school district thirty days next preceding the first Monday of any April or October is entitled to sign a petition under any of these clauses of Sec. 33. Every petition duly filed with the trustees must be

considered by them at their next succeeding stated meeting, and acted upon if possible. If it is found impossible or impracticable to take final action on the day of the regular meeting, for lack of positive information upon some essential point, or other good and sufficient cause, final action may be had at an adjourned meeting, such adjourned meeting being in law but a continuation of the stated meeting. But when an adjournment is necessary it should be for the shortest time practicable, it being the intent and purpose of the law that all proceedings under these clauses shall be completed and consummated as promptly as possible. If a petition is filed in season, and neither acted upon nor in any manner considered on the *next regular meeting*, but another petition must be filed if action is still desired; and for such neglect of duty the trustees will be responsible.

Special attention is invited to the following provisions of the 33d section as to the time within which copies of the records of all new districts and of all changes of district boundaries must be filed with the county clerk.

"Within ten days after any changes are made in district boundaries, whether by division, consolidation or otherwise, the township treasurer shall make a full record thereof in the record book of the trustees, and file a copy of said record, together with a new map of the township, and a list of the tax-payers resident in each of the newly arranged districts, in the office of the county clerk. Compliance with these requirements, within the said period of ten days, is hereby made essential to the validity of any alterations of district boundaries."

For failure, neglect or refusal to comply with the above requirement, township treasurers will be liable on their official bonds, as provided in the 64th section of the act.

Attention is also directed to the following provision:

"If said copy of record, plat of township and list of tax-payers shall be filed as aforesaid, in the office of the county clerk, within ten days after the October meeting of the trustees, the county clerk shall thereupon correct the lists required to be filed on or before the first Monday in September, under section 44 of this act."

A SUGGESTION.

In order to enable the trustees to determine readily and surely who are and who are not legal voters in the respective districts, so as to facilitate proceedings under each or any of the first five clauses of this 33d section, each board of trustees is advised to require its clerk to prepare, with care and accuracy, in a bound book suited to the purpose, an alphabetical list of all the legal voters in the several districts and fractional districts of the township keeping those of each district, and fractional district separate.

The first lists of voters should be made out during the ten days immediately preceding the next October meeting of the trustees, and carefully corrected semi-annually thereafter, namely, during the ten days immediately preceding each subsequent regular meeting of the board. The clerk of the board should be allowed a reasonable compensation for this special service, and should be required to certify to the correction of the lists when first made, and also to the correctness of the additions and alterations made semi-annually thereto.

The lists so prepared and certified may be taken by the trustees as *prima facie* evidence of the facts in the case, in all proceedings with regard to the formation of new districts and the alteration of district boundaries, under the 33d section of the school law. The lists of voters, and corrections thereof, should be made as near the close of each semi-annual period as possible, as above recommended, in order to ensure the listing of all who may have become voters since the last preceding canvass; and, as already stated, it will be the privilege of all who may become voters down to the very day of the regular meeting to sign a petition.

The adoption of this suggestion is respectfully recommended to the board of trustees.

NEWTON BATEMAN,
Superintendent of Public Instruction.

BOOK TABLE.

The Great Central Route Book for 1873. Compiled by W. H. STENNETT, Gen Agent Illinois Central R. R. St. Louis, Mo.

This is a little pamphlet of 68 pp., tastefully published and giving, as the title indicates, lines of travel, facts and figures, such as may be found of interest to the summer tourist. We quote the following note from the compiler:

"To Tourists we would say we have endeavored to open up to them 'paths they have not trod,' and to show to them that in the North and Northwest are places as well worthy their attention as are any on the Atlantic coast, or in the interior of New England.

Along our routes are large cities and towns, and numerous quiet villages, in which the Tourist can make pleasant sojourn, and enjoy health and quiet and comfort. Boating, bathing, fishing, shooting and hunting are accessible at numerous points on almost all of our routes, and any of these can be enjoyed without cost.

The time cards we print herewith are those in effect at the time we write, and are

given merely to show the relative time that will or can be made during the summer season. When the excursion business begins, the Ticket Agents at all prominent points will be fully advised as to the current time, and they will be glad to give any information in their power.

It will be noticed that we will place on sale at Cairo as well as at St. Louis, these *reduced rate round trip* Excursion Tickets. Tourists living south of Cairo can procure their tickets at the Ticket Office of the Illinois Central Railroad, at Cairo, if they so desire, or by writing to Jas. Johnson, Agent I. C. R. R., Cairo, naming the tickets you wish and enclosing the value of the tickets to him, he will send you the tickets."

Dr. Stennett has given in this little pamphlet many items of real value; and what is of more than usual interest to school teachers, he indicates routes through the interior States at prices from \$20 to \$50. These tickets include fares both ways with privilege of stopping over at stations.

Time tables of the trains and short notes of prominent objects of interest on the various routes are found in the book. Parties can have the pamphlet by sending stamp to Dr. W. H. Stennett, St. Louis, Mo.

PERIODICALS.

The New Englander for April is a very able number; one of the best. And we mean this as high praise; for this solid quarterly has been a favorite of ours during fifteen years. It always discusses living questions in religion, science, philosophy and literature. Its notices of books are extensive, thorough and trustworthy. The number before us contains several articles of great value; among them, *The Religious Character of Faraday*, by Prof. Fisher of Yale; *The Treaty of Washington*, in 1871, by Dr. Woolsey; *Moral Intuition vs. Utilitarianism*, by Borden P. Bowne, and *Auguste Comte and Positivism*, by Prof. Adams of Jacksonville, Ill. This last seems to us to deal very thoroughly and fairly with Comte and his system; it meets the great Positivist on his own ground. Mr. Bowne's article is an able discussion of the foundations of moral obligation; this article and the one on Spencer's Philosophy in the previous number lead us to hope that Mr. Bowne may often enrich the pages of the *New Englander*, with his sharp and thoughtful articles. In our opinion, the weakest article in the number, and the only one that is mischievous, is the first one. It is entitled "The Religious Elements of Education and the Public School System," by Dr. Patton of Chicago. We think this is nothing more nor less than the address he gave last winter before the Illinois State Teachers' Association at Springfield. We do not recognize any change in it; and, as we thought last December that the address contained nothing more than the Doctor's editorials in the *Advance*, to which we paid attention in the *SCHOOLMASTER* more than once last year, we do not feel called upon to say any thing more about it now. We hope, however, as the Doctor has put forth his *heresies* in the pages of the *New Englander*, some one will follow him there with a counter-blast of truth; for we believe his heresies are quite as dangerous as those of Comte, or Spencer, or Darwin.

PUBLISHERS' DEPARTMENT.

Miss Youmans's "*Second Book of Botany*," a more advanced work on the same plan as the first, is in press, and will soon be issued. A set of six beautifully-colored charts (Prof. Henslow's American edition) is also in preparation, and will be ready to accompany the new book when desired.

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER.
Volume VI.

ILLINOIS SCHOOLMASTER.

A JOURNAL OF EDUCATIONAL LITERATURE AND NEWS.

VOLUME VI.

JULY, 1873.

NUMBER 62.

THE BIBLE A TEXT-BOOK.

Ought the Bible to be in frequent and regular use in our common schools? The answer depends upon another inquiry. Is the Bible a fit and useful and influential book for and among the young at all times? We reply affirmatively in language other than our own. Read the following—not a tithe of what our own literature contains, for it is full of this great theme:

I have examined all as well as my narrow sphere, my straightened circumstances, and my busy life would allow me, and the result is, the Bible is the best book in the world.—*John Adams*.

It is binding over all the globe, in all countries, and at all times; no human laws are of any validity if contrary to this; and such of them as are valid derive all their force, and all their authority, mediately or immediately, from this original.—*Blackstone*.

If we look abroad through the world of men, the victims of folly and vice, the prey of cruelty, of injustice, and inquire what are the benefits of the Bible, even in this temporal state; the great and the humble, the rich and the poor, the powerful and the weak, the learned and the ignorant reply as with one voice that humility and resignation, purity, order and peace, faith, hope and charity are its blessings upon earth.—*Grimke*.

The Bible contains great and mighty truths which none of us may safely reject; but apart from this, no mind, how uncultivated soever, can be familiar with its glowing beauty and sublimity without being unconsciously refined.—*Fanny Fern*.

The majesty of the Scriptures strikes me with astonishment, and the sanctity of the gospel addresses itself to my heart. Look at the volumes of the Philosophers with all their pomp; how contemptible do they appear when compared with these.—*Rousseau.*

So great is my veneration for the Bible, and so strong my belief that when duly read and meditated on, it is of all books in the world that which contributes most to make men good, wise and happy, that the earlier my children begin to read it, and the more steadily they pursue the practice of reading it through their lives, the more lively and confident will be my hopes that they will prove useful citizens to their country, respectable members of society, and a real blessing to their parents.—*John Q. Adams.*

There is something in the spirit and diction of the Bible which is found peculiarly adapted to arrest the attention of the plainest and most uncultivated minds.—*Dr. R. Hall.*

It happened that amongst our nursery collection of books was the Bible illustrated with many pictures. And in long dark evenings, as my three sisters with myself sat by the firelight round the guard of our nursery, no book was so much in request amongst us. It ruled us and swayed us as mysteriously as music. Above all, the story of a just man—man and yet not man, real above all things, and yet shadowy above all things, who had suffered the passion of death in Palestine—slept upon our minds like early dawn upon the waters.—*De Quincy.*

We have a book of tried efficacy—a book which contains the only successful appeal that has ever been made to the moral sense of man—a book which unfolds the only remedy that has ever been applied with any effect to the direful maladies of the human heart. I refer to the Holy Scriptures.—*Wayland.*

Thus runs the evidence, until the conviction becomes overwhelming that we must in some manner use the Bible in our schools. We suggest a plan which we have found good: let each pupil respond to his name at roll call with a verse of Scripture, of his own choice. This often presents a very interesting phase. The following is the result of the notation of one morning's exercise. The numbers omitted were absentees:

1. Now both the chief priests and the pharisees had given a

commandment, that, if any man knew where he were, he should show it, that they might take him.—*St. John*, *XI*. 57.

2. And other sheep I have, which are not of this fold: them also I must bring, and they shall hear my voice; and there shall be one fold and one shepherd.—*St. John*, *X*. 16.

3. And they took up twelve baskets full of the fragments and of the fishes.—*St. Mark*, *VI*. 43.

5. But the wise took oil in their vessels with their lamps.—*St. Matthew*, *XV*. 4.

6. Know ye that the Lord he is God: it is he that hath made us, and not we ourselves; we are his people, and the sheep of his pasture.—*Psalms* *C*. 3.

7. The Lord said unto my Lord, sit thou at my right hand until I make thine enemies thy footstool.—*Psalms* *CX*. 1.

8. Thomas saith unto him, Lord, we know not whither thou goest: and how can we know the way?—*St. John*, *XIV*. 5.

9. And he was teaching in one of the synagogues on the Sabbath.—*St. Luke*, *XIII*. 10.

12. But God raised him from the dead.—*Acts*, *XVIII*. 30.

13. She openeth her mouth with wisdom; and in her tongue is the law of kindness.—*Proverbs*, *XXXI*. 26.

14. But wisdom is justified of all her children.—*St. Luke*, *VII*. 35.

17. All things were made by Him: and without Him was not anything made that was made.—*St. John*, *I*. 3.

18. Blessed are the meek: for they shall inherit the earth.—*St. Matthew*, *V*. 5.

19. Give me understanding, and I shall keep thy law, yea, I shall observe it with my whole heart.—*Psalms* *CXIX*. 34.

22. Then Peter and the other apostles answered and said; we ought to obey God rather than men.—*Acts*, *V*. 29.

26. He that believeth on the Son hath everlasting life: and he that believeth not the Son shall not see life: but the wrath of God abideth on him.—*St. John*, *III*. 36.

27. And the word was made flesh, and dwelt among us, (and we beheld his glory, the glory as of the only begotten of the Father), full of grace and truth.—*St. John*, *I*. 14.

30. And the people asked Him, saying, what shall we do then?—*St. Luke, III. 10.*

31. Blessed are they that mourn ; for they shall be comforted.—*St. Matthew, V. 14.*

32. I write not these things to shame you, but as my beloved sons I warn you.—*I. Corinthians, IV. 14.*

44. Ye shall seek me, and shall not find me ; and where I am, thither ye cannot come.—*St. John, VI. 34.*

45. After this man rose up Judas of Galilee in the days of the taxing, and drew much people after him ; he also perished ; and all, even as many as obeyed him, were dispersed.—*Acts, V. 37.*

46. And straightway coming up out of the water, he saw the heavens opened, and the spirit like a dove descending upon him.—*St. Mark, I. 10.*

This is the result of no effort to obtain a model exercise for exhibition. It is an average and representative sample of what the school has daily produced. Sickness and foul weather made attendance small on this particular day, but it will serve as well to illustrate the plan. Our readers must recollect too that ours is a country school, the ages of the pupils ranging from seven years to twenty-one ; and while some selections may not seem exactly in place, there must be a due allowance for the restrictions of some, and inexperience of many.

In pursuing this or a similar plan we attain the following ends :

We are gradually familiarizing our pupils with many common and valuable texts ; we are habituating them to refer frequently to the Holy Writings, under which discipline they will by degrees come to feel that the Bible is a book for reference in every-day and business life ; the hearing of one truth naturally begets a desire to examine the context, and, finally, we are encouraging our pupils to heed the injunction of the Savior—hear what he says : Search the Scriptures, for in them ye think ye have eternal life : and they are they which testify of me.

W. M. CRICHTON.

BOND COUNTY.

ARITHMETIC.—III.

In the March SCHOOLMASTER we considered the principles involved in the writing of numbers ; the directions there given will be sufficient for the writing of integral numbers as high as one million. This is as much as is necessary for the juvenile classes ; and they should be drilled upon the writing and reading of numbers to this extent, until either can be done with the *utmost promptness and accuracy*. One very bad habit, that often obtains with young workers in arithmetic, should be broken up, or rather care should be taken that it never be formed. I allude to a custom of first writing a number almost at random, perhaps from the right hand, and then enumerating, erasing and correcting. The pupil should be taught to begin to write always at the left hand, and to write the number promptly and correctly *at the first trial*. For this purpose he must be perfectly familiar with the name of every place up to the sixth ; he must remember that a cipher is to fill any place between a figure and the decimal point, if it would otherwise be vacant. These ciphers are not inserted, as is sometimes said, “to show that there are no numbers of the denominations indicated,” but to show the *place-value* of those figures farther from the point. Suppose the pupil thus trained is required to write, in figures, four hundred five thousand seven hundred twenty. He begins at the left hand, and thinks as he writes—at first, let him talk aloud —“Four hundred thousand, no ten thousand, five thousand, seven hundreds, two tens, no units, point.” As each word is pronounced, let the proper figure be written ; when the word “point” is reached and the dot made, the work is complete ; and there must be no doubt of its accuracy. Practice of this kind, sufficient in amount, will be sure to accomplish the desired result, and I cannot too strongly urge its importance upon the teachers of children.

Older pupils should be trained to write large numbers—numbers requiring thirty or forty figures—in the same way. But before this can well be done, the pupil must be drilled on the grouping of figures into periods, and he must be made familiar with the names of the periods. Teach him thoroughly that each group or period contains three places, viz : Units, tens and hundreds of that denomination

which gives name to the period. Then, let him learn the names of the periods, at least to decillions: it will not be difficult to learn them to vigintillions. He should be trained to give these names, with perfect ease, *forward or backward*; especially backward, as this is the direction in which he will think of the names while writing the numbers. Now another very important thing, although rarely if ever found in the arithmetics, is to make him familiar with the significance of the first part of these names,—the part that precedes the termination *illions*. These signify numbers in their regular order; as, *quint.* five, *sext.* six, *sept.* seven, and so on. It is not a difficult task to learn these thoroughly, even as high as *vigintillions*. Next, teach another thing, viz: *that the first part of the name of the period always signifies a number two less than the number of the period*: for instance, octillions is the name of the *tenth* period. Follow this with hundreds of drill questions like the following: What is the name of the fourteenth period? Duodecillions. What is the number of tridecillions' period? The fifteenth, etc. Then push the work, not only to the names of periods, but of places; as follows: What is the name of the thirty-seventh place? Units of undecillions. Why? Because it is the first place in the thirteenth period. What is the name of the twenty-first place? Hundreds of quintillions. Why? Because it is the third place in the seventh period. Which is the place of tens of quadrillions? The seventeenth. Why? Because it is the second place in the sixth period. When answers to such questions can be given with promptness, the pupil is ready to write numbers with great facility. Moreover, he can read any number already written as soon as he can divide it into periods, and count them. And he ought always to be required to read in this way, and never be allowed to enumerate, *units, tens, hundreds, thousands*, etc., in the common, humdrum way. Let no teacher say that it will take too much time to give the drill here indicated. It will take a good deal of time to become thorough; but subsequent rapidity and accuracy of work will compensate a hundred fold.

It will now be a good exercise to train the pupil to read parts of a group of figures without regard to the rest of them. For instance, let a line of figures be written as follows: 79|60054795|457689325. After these have been read as before directed, put vertical lines across

the group, as we have done. Now, let the figures between the vertical lines be read; group them in periods of three, from the right, and read as before; they express the number sixty millions, fifty-four thousand, seven hundred ninety-five. This number answers the question, *How many?* Let it be followed by the question, *What?* To ascertain this, we must find what place the right-hand figure 5 occupies with respect to the decimal point. This figure occupies the tenth place at the left of the point, hence the name of the number just read is *billions*. Change the lines and proceed again, or add more figures, moving the decimal point farther away. The pupil will soon learn that a change of the decimal point does not disturb his answer to the first question, but only the second answer; for, *the same figures standing in the same order always express the SAME NUMBER; but the NAME of the number is determined by the place of the right-hand figure of the group in respect to the decimal point.*

Now, every one of the laws and precepts that we have laid down, both in this article and in our last, is just as applicable on the *right* side of the decimal point as on the *left*, and it is very important that the pupil be made familiar with this fact in due time. If moving a figure one place to the left of its former place makes its value ten times what it was before, then moving it one place to the right makes its value one-tenth of what it was before; and this is true always and everywhere in the decimal system. Some little practice on decimal fractions may very properly come as soon as the pupil can write and read promptly, integers as high as one million. And it is very important that the young pupil learn to read expressions commonly called "mixed decimals," as indicating *one number*. For instance, let 7.5 be written; ask *How Many?* Seventy-five. *What?* Tenths. The advantages of looking at numbers in this way are very numerous; I think most teachers ought to see some of them at once, but some of them may be presented hereafter.

When the pupils have mastered the work given in the first part of this article, then let them take decimals of many places, learning the names of places and periods at the right, as well as at the left, of the point. It will soon be seen that, while the *fourth* place at the left is *thousands*, the *third* at the right is *thousandths*. And so, generally, whatever name any place at the left may have, a place one step nearer

the point at the right will have a corresponding name. But, in learning these corresponding names, one very important thing is to be observed. The name corresponding to tens of thousands, for instance, is ten-thousandths,—a compound word; and so of all names at the right corresponding to tens and hundreds of any name at the left. I have often found it somewhat difficult to make *teachers* see that a ten of thousandths is really one hundred times as great as a ten-thousandth. When the pupil is familiar with the writing and reading of large numbers written on both sides of the point, then exercises with figures between vertical lines may come in again, sometimes including the point between the vertical lines. The cipher must sometimes be used at the right as well as at the left, and for precisely the same reasons *and no other*.

With such exercises as I have suggested, the pupil will soon get rid of the nonsense that annexing or prefixing a cipher multiplies or divides a number; it is the change of the figure or figures in respect to the decimal point that does this, because it gives a new *place-value*. To show the absurdity of the common statement, suppose I move .07 one place to the left, it becomes .7; here I have multiplied by ten and have *lost* a cipher in the operation.

June 9, 1873.

E. C. HEWETT.

FIGHT IN YOUR OWN ARMOR.

When David started forth in the armor of Saul, to meet the haughty challenge of Goliath, he found himself so much encumbered and embarrassed by its unaccustomed weight that, stopping only to make a brief explanation to the king, he speedily divested himself of it. Doubtless, the armor of Saul was faultlessly beautiful, and fitted the stately form of the King of Israel with distinguished grace. But for the youthful shepherd unused to do battle with shield and sword and helmet, the simple sling with its pebbles was the most appropriate weapon. And David showed true wisdom in firmly declining, albeit with modesty and courtesy, the offer of the princely armor, preferring to meet the great warrior of Gath in his own pecu-

liar mode of warfare rather than to run the risk of being entangled by the unwieldiness of instruments that he had never used. And so, the smooth stone gathered from the wayside brook sank with fatal effect into the brain of the Philistine, whereas with the sword of Saul, David would but have cut ridiculous flourishes in the air and rendered himself alike the pity of his friends and the derision of his foes. The danger and folly of endeavoring to fight in the armor of another is illustrated by the following sketch.

The public school in the village of W. numbered about two hundred pupils and was divided into three departments, the primary, intermediate and high—although the last corresponded to what in most graded schools is called the grammar school. Four teachers were employed—the principal and an assistant in the high-school, and one teacher in each of the lower rooms,

This school up to the time of which I am about to speak had always had a male principal; and the man last employed was very peculiar in all respects, and quite remarkable in some. He was talented and original, a fine scholar and an excellent disciplinarian; his method of government being a certain magnetic influence which, accompanied by the tall figure, solemn, pale face, and large, dark eyes, inspired the scholars with an awe insuring perfect order and quiet, with very little apparent effort. The school-house was situated on a rise of ground at a little remove from dwelling-houses, and was surrounded by quite a number of oak trees, which helped to produce a pleasant play-ground for the scholars. When the extremely warm days of summer came on, and the ninety children in the upper room grew weary at their books, he adopted the plan of allowing a class at a time to go out of doors and study while the class previous to theirs was reciting. They would in a quiet, orderly manner leave the room, go down stairs, take their places under the trees in groups in sight of the teacher from the window above, and study till the call of the little bell summoned them in. Then, in an orderly, quiet manner, they would ascend the stairs and go to a well-learned and enthusiastic recitation. But, in the midst of this prosperous condition of things, the principal died, after a short but severe illness, and a lady was his successor: while the assistant remained in the same position as before. Of course, the school regulations were considerably

changed under the new administration; still, during the winter term all went on quite harmoniously, except that the new teacher was frequently informed by Miss B., the assistant, that Mr. H., the former principal, did so and so, or Mr. H. did not do so and so. These remarks, though extremely irritating, were calmly listened to with enforced patience, the replies being simply, "Ah! indeed!" or "Is that so?" or "That was a good idea." When the summer time came again and the warm air made the crowded children restless and uneasy, Miss B. suggested Mr. H.'s method of letting the scholars study outside. The new teacher did not like the plan, never had tried it, had doubts of its success, in short, viewed it quite unfavorably. Miss B. with considerable pertinacity, urged its being tried: the more so, as she had had charge of the high school during the few remaining weeks of the term after Mr. H.'s death, and had seemed to look upon the new teacher from the first as an intruder. After some reflection and hesitation, the principal finally yielded, and the scholars were allowed to go out and study, subject to the regulations of the previous summer. For a short time things went on tolerably well; but soon the pupils began to show indications of confusion and disorder. They went up and down stairs noisily; they wandered from tree to tree; they got out of range of the teacher's eye, and sometimes out of hearing of the bell. Their lessons were illy prepared and sometimes not prepared at all. There was a Catholic Church near by in process of erection: it had for sometime been inclosed, but for lack of funds the work had been discontinued. It was finally discovered that several of the older boys had been in the habit of playing cards under its sacred shadow while apparently out for purposes of study, and once the priest himself happened to come by that way just as they were fairly ensconced therein for the accustomed game. To say that his sacerdotal robe covered an irate breast would be to express feebly in words what the luckless urchins felt as they fled in dismay from the presence of his holiness and sought refuge in the school-room. Of course, the teacher seeing what a failure had come of following the judgment of another contrary to her own, did what she could to remedy the evil by now following her own. And so the plan was discontinued; but not till incalculable mischief had been produced, which was not wholly eradicated during

the entire term. When was the result of a wrong doing ever wholly eradicated? A spirit of idleness, confusion and lawlessness seemed to pervade the school, which, though it never broke out in open violence or revolt, made sad inroads upon progress and order. And, in the midst of it all, Miss B. stood by smiling at the mischief that following her plans had produced, comparing from day to day the former with the present principal, and circulating in a covert manner intimations and insinuations derogatory to the school. Thus the benefits of a term of school were in a great measure neutralized by the unladylike, almost malicious, offering of the armor of a dead hero on the one hand, and on the other by the lack of sufficient independence in his successor to refuse it utterly and fight in her own.

RURAL, May 21, 1873.

MARY ASHMUN.

THE STIFF, FORMAL METHOD vs. THE LOOSE, SLIP-SHOD METHOD.

Go into a school famed for its excellence, and likely you will find the teacher giving attention to the minutest details of conduct and recitation. Such a teacher believes that the formation of habits in his pupils is of the utmost practical importance. He accordingly gives heed to the manner in which his pupils sit in their seats, stand in the class, hold their books, walk across the room, address their teachers, etc. Above all he insists upon their giving attention to the recitation while in the class, or on their quiet absorption in their several tasks while at their seats. He even keeps up the pressure of his supervision upon them in the yard and on their way home, everywhere demanding of them courtous behavior. Such a teacher will receive an emphatic disapproval from a teacher of an opposite class. "I believe in geniality and good nature, and not in so much stiffness and formality; such a teacher (as the one described) would drive out of a child all the nature he has, and make a machine of him." By this feint he hopes to prevent a disparaging comparison with his own school, which if you visit you will find very much tending to the extreme denominated "too easy." On your entrance every eye is turned upon you; both the pupils in their

seats and those in the class are so little engrossed in their work that they find a stranger more attractive.* You find that the pupils who are reciting do not all pay attention to the recitation after order is restored; that in fact many pupils who should be engaged in study are listening to the recitation. The teacher is very animated in the conduct of his class, apparently more so than he had been before you entered. He addresses his remarks more particularly to the brightest pupils of his class. He is genial, and his geniality comes on him by fits. Some days he scarcely feels like hearing the recitation at all; on others he is very animated; he is prone to disregard the regular hours of recitation and lets the programme fall behind, trusting to make it up by extra vigor. There is no fixed system in his own efforts and consequently his pupils lack it. They do not get into fixed habits of work, and are not attentive to the formalities which make school life run pleasantly and profitably. But their school training is such as to develop, rather than subordinate, their idiosyncrasies.

The former of these two types of schools is commonly preferred by school directors and the profession generally; the latter type is often the most popular with the community at large. The newspapers very often attack the former school and show it no mercy. From the standpoint of mere theoretic acquirement, so much attention to details merits rebuke. "That the pupil should sit in this particular position rather than in that, does not help him understand his lesson any better." "The strength of the teacher and of the pupils is wasted on mere formalities." But the profession makes reply: "No great achievement can be made except by persistent effort, which implies a complete conquest over one's self; hence, the theoretical depends upon the moral. The moral consists in a system of habits, every one of which implies self-denial and a preference of duty over pleasure. If its defence is well-grounded, we are to look upon all of that careful attention to details as contributive toward the formation of correct habits. Without correct habits no great result can be achieved, although brilliant occasional performances may result."

W. T. HARRIS, *in the Western.*

THE SMOOTH R.

It is evident that certain English vowels never take *r* immediately after them without breaking the syllable in two ; thus the words *here*, *mire*, *more*, *pure*, *our*, are pronounced as if written *he-ur*, *mí-ur*, *mo-ur*, *pu-ur*, *ou-ur*. And the question has been raised whether the second syllable in these couplets, viz., the part which is here represented by *ur*, is an element, a value strictly indivisible into like sounds. To this question I answer, that the value following the long *e* in *here* is the same, except in respect to stress, as in the word *err*: there are two distinct positions of the vocal apparatus, and these positions are for the formation of two unlike sounds.

That it would be wise to insist, in class drill, on the separation of these elements, I do not affirm. The statement is, that as there are three elements in *urn* and in *earth*, and four in *bird* and in *work*, so in *mire* there are four. The partial obscurity of the vowel *u* in *mire*, as compared with the vowel *u* in *urn*, is due to the exhaustion of the voice in uttering the preceding accented vowel, long *i*, the two vowels being uttered without articulate intervention, and at one impulse.

Writing the eight simple long vowels in what has been called their natural order, and placing *r* after each, we may form the words *here*, *her*, *payer*, *pare*, *far*, *for*, *fore*, *poor*. In *payer* the *r* is apparently, not really, more remote from the long *a* than *r* from the *e* in *here*, the *o* in *fore*, or the *oo* in *poor*. At all events, the word *payer* has the long *a* as closely followed by palatal *r* as is possible in any English word: the word *pare* has a different sound of *a*.

Now, in pronouncing the eight words of the list, we shall observe that the contact of the *e* and *r* in *her* is *unbroken*, the tongue while sounding the *e* being in favorable position for rising to form the *r*. We notice the same relation in *far* and *for*: there is no "obscure" vowel intervening. Following the Italian *a*, then, in *far*, we have the smooth, or untrilled, or palatal *r*: in *here*, there is not only this smooth *r*, but, between it and long *e* the light vowel. Observe that the second word of the list, *her*, presents under full stress in the utterance, the same vowel that surreptitiously finds place after the long *e* in *here*, long flat *a* in *sture*, long *o* in *fore*, and *oo* in *poor*.

If we now examine the relation of the four *diphthongs* to *r* following, we shall find these observations confirmed; for, the *second term* of each diphthong will determine the mode of approach toward *r*. Long *i*, consisting of the two elements, Italian *a* and long *e*, obeys the same impulse that guides its terminal part (*e* in *here*), and refuses immediate contact with *r* following; hence, *mi-ur*. *Ou*, composed of Italian *a* and *oo*, on receiving *r* is like *oo* in demanding the intervention of the slight sound of "tilde *e*" (the *e* in *her*); and long *u*, composed of short *i* and *oo*, shows the same stubbornness. The remaining diphthong, *oi*, is almost never followed by *r* in the same syllable; the word *coir* (cordage) is the only exception that I have seen. The attempt to pronounce this word will result either in adding stress to the short *i* (and each short vowel is readily followed by *r*), or in changing the *i* to long *e* and thus necessitating the "tilde *e*," as in *fire*, *here*. The seeming contact of *oi* with *r*, in *reservoir* and other words of French origin, is found to give for a termination broad *o* and *r*; thus, *reservoir*.

To review. (1.) The tilde *e*, or *e* in *her*, is the same in quality with, but differing in stress from, the sound which we find interposed between *r* and any one of the following list of vowels, viz., long *e*, long flat *a*, long *o*, long *oo*. (2.) In no English word is long *a* required to assume relation to a succeeding *r* in the same syllable. This declaration, however, may call to mind the Irish pronunciation of *Mary*—*Ma-ur-ry*.

It is interesting to note the different pronunciation of some of the words we have been considering, according as they come from American or from Scotch or perhaps English mouths. The obscure sound, so light yet so evident, before the *r* in *door* as spoken by an American, in the utterances of the old-country people would be almost imperceptible; and hundreds of words embracing the combinations we have been considering present a similar diversity. The question of real moment is this: How far may we wisely push our efforts, in self-culture and in the school-room drill, toward eliminating this "natural vowel," so very generally heard among us, even in words where it has no written representative. I say "even" where unwritten; for there is a sentiment favorable, among thoughtful readers, to sounding the *e* in *flower*, while, in spite of habit, there is a prejudice in favor of the omission of that

sound in *flour*. And yet the two words are, as a rule, undistinguishable by the ear. So of *dire* and *dyer*.

In a preceding paragraph, I referred to the tongue as being in a favorable position for rising to aid in forming the sound of *r*. Let our teachers be prevailed on to *acquire*, where they have not already done so, the habit of *encouraging the tongue to rise*, and thus utter the element *r* in *barn*, *farm*, *far*, *err*, *burn*, and scores more of similar words.

THOMAS METCALF.

OVERWORK OF CHILDREN.

A correspondent has recently given, through our columns, a much-needed warning in regard to the overwork of children in our public and private schools. There can hardly be a question that, taking the country through, parents are doing a serious injury to the *physique* of their children by requiring excessive brain-work and too many hours in close school-rooms. We hear complaints on every side in regard to the pale faces, nervous habits, and liability to disease of children of good healthy stock. Instances are not uncommon of children suffering under that malady which ought to belong alone to that period of life when the vital powers have been over-strained—we mean insomnia, or sleeplessness. Extraordinary nervous disorders are also appearing among our little ones, and evidently a foundation has been laid for worse disorders in later life. The physique of the whole nation is apparently injured by this excessive brain-work in childhood. And the extraordinary development, in the last few years, of various forms of nervous kinds of brain-diseases and paralysis are the fitting results of the carelessness shown a generation since in the treatment of childhood. If we only had a more truly scientific medical profession, our physicians would not alone confine themselves to the cure of these diseases, but would seek to trace them to their legitimate causes, in the bad habits taught to children, or in the overwork demanded from them.

We no longer see those good, stolid, stupid children, such as some of us can remember, or such as may be seen now in England or Germany. Our boys and girls are sharp, quick, nervous, prematurely bright, and with the qualities, and liable to the evils, of older persons.

If mothers did but know it, the best quality in a child, and the best promise for its physical future, is a stolid, healthy calm, which comes from even balance of the muscular and nervous systems. The preternaturally active children will waste the "wine of life" before they can drink it, and die of paralysis in middle life. Stupidity in American childhood is an invaluable quality. The great cause of the oversharpened condition of our children is evidently in our requiring too much brain-work from them, and in keeping them too many hours in school. Six hours' study, even for the mature brain, is a good day's work: and one of the greatest philosophers of this day, Mr. Darwin, is said to have accomplished his amazing results in less than an average of three hours per day. In this city most school children are required not merely to devote their five hours to the school, but two or three hours outside of it, to the study of lessons. The hours in the school, even if the child be not studying, are exceedingly trying to the nervous system: the brain is kept constantly alert, while the air which should feed it is continually poisoned with hundreds of breaths. The nerves become impatient and morbid, and not proper relief is afforded them in muscular movement. The true remedy for this evil is the establishment of "half-time schools."—*N. Y. Times.*

SUGGESTIONS.

Taxidermists will find corn meal an excellent substitute for plaster of Paris in cleaning the feathers of birds, and in keeping the plumage free of blood and oil in the skinning process. The fact of its always being obtainable, is not the least of its advantages.

In preparing birds' eggs for the cabinet, do not disfigure them by piercing *each* or *either* end. The questionable practice of applying one's mouth intimately to the end of a questionable egg may be easily avoided and even better results obtained, as follows: Make *one small hole in the side*, then with a tube prepared for the purpose which may be purchased at any depot of naturalists' supplies, blow the contents of the egg from the same orifice used for the insertion of the tube. If the contents are not readily removed, soak the egg thoroughly in warm

water preparatory to a second trial, which will be successful. Afterwards gum the perforated side of the egg to the interior of the box or care as desired, and it is disposed for exhibition in the best manner possible. Five or six inches of small glass tubing drawn down at one end is the flame of an alcohol lamp, or even a carefully selected wheat or rye straw answers the same purpose as a more expensive egg-eviscerator.

O. S. WESTCOTT.

MAYWOOD, March, 1873.

EDITORS' DEPARTMENT.

New York criminals seem destined to absorb a large share of public attention. The Stokes case is to be reopened; he is to have a new trial; "bets on the result are in favor of Stokes," the telegraph says; and the newspapers overflow with sickly, foolish and corrupting reports of "interviews" with the elegant scoundrel. Just now comes in, also, the new sensation of the murder of Walworth, by his son, a youth of nineteen. The young man went from Saratoga to New York, for that very purpose; invited his father to his room at the hotel; shot him four times; and then telegraphed the fact as coolly as if he had shot a dog. Yet, there is probably but small chance of his receiving any adequate punishment; while he may be very sure of maudlin sympathy, presents of bouquets, and "interviews" from reporters.

The leading editorial in the *Christian Union* for June 11th, has the true ring in respect to the Walworth murder, and the evil influences in society of which such an affair is the legitimate outcome. It very pointedly says: "There is no reason why life should be sacred in the felon's cell, and cheap in every highway. It has almost come to this: that no man is certain to escape a violent death save the undoubted homicide." One would almost think from these words, if the editor did not take pains to protest against it, that Mr. Beecher is about to become an advocate of capital punishment. We are a little at a loss to know what he would recommend; for, on the next page, in discussing the question, "What to do with Criminals?" he asserts that prison-life generally renders the criminal more wicked than he was before. Well, we confess that it is a troublesome problem; but we think the reform needs to begin in public sentiment,—a love of right and justice

must take the place of silly sentimentalism ; a sympathy for honest virtue must exceed that for criminals who justly suffer the reward of their deeds, before any hopeful result can be anticipated.

We find a great many things to approve in the *Christian Union*, but it publishes some communications that seem to come from fools or lunatics ; we called attention to one such in our last number. In the number of that paper referred to above, we find a communication on the Public School question, which leaves Dr. Patton's position far in the rear. We do not think it worth while to waste much ink over it ; but the writer's conclusion is simply to close all our public schools, and " have *small, private* schools, where every child can be under the eye and hear the loving voice of a spiritual guide ; and let the State foster such schools in every lawful way." The arguments are given somewhat at length ; but it is sufficient to say of them that they are admirably *in keeping* with this very sapient and reasonable conclusion.

The notice that stood at the head of our Book Table for three months, has not pleased "one of our educational exchanges." The criticism comes from an unexpected quarter. In our innocence, we supposed that *occasionally* a book review was published "for which a price was paid."

We are glad to know that such things do not occur. We have removed the obnoxious lines.

Herbert Spencer, in his papers on Sociology, published in the *Popular Science Monthly*, has treated of several kinds of *bias*,—the political bias, the class bias, etc. Of course he says many very valuable things : and we need not say that he says them clearly and forcibly. In the July number he presents his views of the *Theological* bias ; we suggest that the next in order come the *scientific* bias, and the "evolution" bias. We really hope he will not fail to give us these ; such an omission would be unscientific.

The meeting of the Society of School Principals, which meets at Ottawa July 8th, 9th and 10th, in fifth annual session, promises rich returns. The programme remains nearly the same as when published in the June SCHOOLMASTER. A few names have been added to the list of debaters. A general invitation to be present has been expressed among the leading superintendents and principals. The number in attendance at the meetings is never so great as at the winter meeting of Illinois teachers, but the material has been heretofore superior, and the work more pointed, and limited in scope. Programmes are ready for distribution by the ex. com., E. W. Coy, Normal, J. H. Freeman, Polo, E. A. Gastman, Decatur.

Our attention has been called to a recent patent called Knowlton's Universal Bath. It is made of rubber, is light, weighing but fourteen pounds, and a really valuable piece of household furniture. School-masters who live outside the large cities, cannot be accommodated with furnished bathing rooms in their houses; this invention furnishes a superior substitute. We have tried it and we like it.

Teachers visiting Chicago this summer will find a hearty welcome at the book-store of Jansen, McClurg & Co., whether they may wish to patronize the firm or not; they will find at the store a convenient place for reading and writing, specially prepared for visitors, and which they are perfectly free to use. We are glad to mention this liberal arrangement; none the less praiseworthy, because the firm are likely to be paid for their outlay by the increased trade it will bring them.

ED. SCHOOLMASTER.—In the June number I am made to name Haine's English Literature, for which read Taine's English Literature. JAS. H. BLODGETT.
ROCKFORD, ILL., June, 1872.

EDUCATIONAL INTELLIGENCE.

CIRCULAR—30.

STATE OF ILLINOIS, }
DEPARTMENT OF EDUCATION, }

SPRINGFIELD, JUNE 3, 1873.

WOMEN AS SECURITIES.

In circular No. 28, current series, the general principles governing women as school officers, were stated. Touching the competency of women to sign their own official bonds, and to become sureties upon the official bonds of others, the Attorney General has given the following opinion:

"1. It has never been the law that mere sex was a disqualification to sign an official bond or enter into any legal contract; but coverture, except so far as modified by recent statutes is a disqualification.

2. A married woman has not power to make herself liable as surety upon the official bond of another person; but, when elected to the school office under the recent law, she may sign her own official bond and make herself and separate estate liable thereon.

3. Unmarried women of lawful age may sign official bonds for other persons as security, and incur the same liability thereon as men. Section 55 of the school law requires the security upon the treasurer's bond to be a freeholder—but a woman owning a freehold estate in real property, is a freeholder within the meaning of the law."

The above, with the general instructions contained in circular 28, will enable all parties concerned to proceed intelligently and legally, when the act in relation to the election and appointment of women to school offices takes effect.

NEWTON BATEMAN,
Superintendent of Public Instruction.

REPORT OF ATTENDANCE FOR MAY, 1873.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
Cincinnati, O.....	27,668	25	21,287	20,277	95-2	4,684	.....	John Hancock.
Princeton, Ill.....	609	20	539	500	92-5	108	165	C. P. Snow.
Terre Haute, Ind.....	2,362	20	2,182	2,011	92	1,021	590	Wm. H. Wiley.
West and South }.....	1,101	19	1,013	920	90	248	251	{ J. H. Blodgett.
Rockford, Ill, }.....	1,101	19	981	836	85-2	340	204	{ O. F. Barbour.
Danville, Ill.....	1,101	19	981	836	85-2	340	204	J. G. Shedd.
Macomb, Ill.....	544	20	596	560	94	48	332	Matthew Andrews.
East Denver, Colorado.	713	19	613	548	89-3	461	137	F. C. Garbutt.
Denison, Ill.....	107	20	96	80	83	52	6	Z. T. Hawk.
Marshalltown, Iowa.....	.....	.....	.....	.....	.....	.....	.....	Chas. Robinson.
Cedar Falls, Iowa.....	.....	.....	.....	.....	.....	.....	.....	J. K. Sweeney.
Shelbyville, Ill.....	496	20	436	.....	86	155	133	Jephthah Hobbs.
Polo, Ill.....	468	20	412	374	91	13	136	J. H. Freeman.
Rock Island, Ill.....	1,104	20	936	866	91	37	262	I. F. Everett.
Winchester, Ill.....	.....	.....	.....	.....	.....	.....	.....	Henry Higgins
Edwardsville, Ill.....	.....	.....	.....	.....	.....	.....	.....	H. H. Keebler.
Marengo, Iowa.....	411	20	379	353	93-2	37	163	C. P. Rogers.
Sandwich, Ill.....	380	19	352	324	92-1	49	103	Harry Moore.
East Mendota, Ill.....	.....	.....	.....	.....	.....	.....	.....	J. R. McGregor.
Freeport, Ill.....	1,536	19	1,158	1,195	92-3	99	.....	Charles C. Snyder.
Rochelle, Ill.....	346	20	329	314	95-3	16	180	P. R. Walker.
Normal, Ill.....	327	20	305	278	91-1	80	78	Aaron Gove.
Albia, Iowa.....	271	20	245	230	94	19	121	Cyrus Cook.
Escanaba, Michigan.....	209	20	160	131	81	62	73	N. E. Leach.
Belvidere, Ill.....	252	22	240	218	98	23	120	H. J. Sherrill.
DeKalb, Ill.....	213	22	208	182	90	46	47	Etta S. Dunbar.
Toledo, Iowa.....	217	20	204	187	91-2	45	57	A. H. Sterrett.
Lincoln, Ill.....	.....	.....	.....	.....	.....	.....	.....	I. Wilkinson.
Sheffield, Ill.....	196	22	173	144	84	36	35	J. A. Mercer.
South Belvidere, Ill.....	334	.....	281	268	95-1	36	112	J. W. Gibson.
Altona, Ill.....	165	20	151	135	89	117	74	J. H. Stickney.
Yates City.....	163	12	152	143	94	151	94	A. C. Bloomer.
Maroa, Ill.....	128	22	110	102	93	26	.....	Jas. Kirk.
Lyndon, Ill.....	130	21	123	112	91	22	31	O. M. Crary.
Ridott, Ill.....	.....	.....	.....	.....	.....	.....	.....	C. W. Moore.
Knoxville, Ill.....	.....	.....	.....	.....	.....	.....	.....	M. H. Ambrose.
Blue Island, Ill.....	198	.....	185	179	96	20	141	S. M. Seymour.
Heyworth, Ill.....	130	22	120	101	84	93	16	J. E. Jewett.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

CHICAGO.—At a recent meeting of the Board of Education the Committee on the Salaries of Teachers, presented a report, setting forth that they had consulted with the Committee on High Schools, and the Normal School, and with the Committee on the Employment of Teachers, and had decided to submit a statement of facts, and then the recommendations agreed upon.

For some years the labors of the members of the Board had been steadily increased, and the proposed increase in the school accommodations would still continue to increase their miseries, and add to their responsibilities. Their salaries had been unchanged for five years, except that the salary of the Superintendent has been reduced. What is true of the members of the Board is also true of the principals of the High and Normal Schools. Serious loss has been suffered in consequence of some teachers in the High School leaving because they could obtain a better remuneration elsewhere, while the principal had only been retained on account of his own self-sacrificing spirit. The purpose to maintain an equality of salary on the part of the

lady teachers in the High School, with that of the lady principals of the Primary schools, has not been observed as it should have been, during the last year. The absolute equality in matters of salary of all male teachers of the High School was not considered wise. Certain departments in the High School require a larger experience and a higher degree of special training than others. In some departments the number of pupils is so small as to make the expense for tuition unduly large. In other departments requiring the services of two teachers the committee thought one might be made responsible for the work, and receive the help of a younger person at a less salary, the efficiency of our schools would not be decreased by the introduction of an intermediate school, between the district and primary departments, as some of the primary schools in sparsely settled districts and some of the district schools might be transferred to it. Since the reduction of the salaries of some of the teachers, an excellent spirit has been manifested, and the committee thought they ought not to disappoint the hope that the salaries would be restored to what they were before the fire. At present rates it was extremely difficult to supply vacancies with first-class talent. In view of these facts the introduction of the intermediate department was recommended.

The following schedule of salaries was also recommended: For Superintendent of Schools, \$4,500; for Assistant Superintendent, \$2,750; for Building and Supply Agent, \$2,750; for School Agent, \$1,000; for Messenger, \$750.

HIGH SCHOOL.—For Principal, \$3,000; for four male Assistants, each, for first year, \$2,000; for second year, \$2,250; for third year, \$2,500; for three male Assistants, each, first year, \$1,200; for second year, \$1,350; for third year, \$1,500. For all other male Assistants, first year, \$1,800; second year, \$2,000, and third year, \$2,200. For all female Assistants, first year, \$900; second year, \$1,000; third year, \$1,100.

NORMAL SCHOOL.—For Principal, first year, \$2,250; second year, \$2,500; for third year, \$2,750. For Principal of School of Practice, \$1,200; for second year, \$1,300; for third year, \$1,400. For female Assistants, first year, \$900; for second year, \$1,000; for third year, \$1,100. For teacher of Drawing, \$1,000. For teacher of Elocution, \$1,000.

DISTRICT SCHOOL.—For Principal, first year, \$1,800; for second year, \$2,000; for third year, \$2,200. For head Assistant, first year, \$900; for second year, \$950; for third year, \$1,000. For Assistants, first year, \$550; for second year, \$650; for third year, \$750, and if appointed First Assistants after third year, \$800.

GRAMMAR SCHOOL.—For Principal, first year, \$1,200; second year, \$1,400, and \$1,600 the third year.

PRIMARY SCHOOLS.—For Principal, first year, \$900; for second year, \$1,000; for third year, \$1,100. Assistants as in District Schools, which will leave the system as follows:

1. High and Normal Schools.
2. District Schools, embracing all grades of pupils with Principal, head Assistants, and Assistants according to the rules of the Board.
3. Grammar Schools, embracing all grades below second grade, with Principals and Assistants.
4. Primary Schools, embracing all grades below fifth grade, with Principals and Assistants.

Provided that no change shall be made which will reduce the salary of any Principal or head Assistants by virtue of such change.

The report was accepted and ordered published.

On motion of Inspector Stone, it was decided to pay teachers their bills on Wednesday, June 25th.

COLORADO.—In East Denver a school-board has recently been elected which is disposed to employ teachers strictly with regard to merit. Heretofore personal influence in too many cases has been the leading motive in making the selections. The schools of Denver it is now hoped will soon compare favorably with those farther east.

At present Denver comprises three school districts, designated by East, West and North. In East Denver the past year, a building that accommodates 600 scholars has been completed and furnished at an expense of about \$80,000. This is already inadequate to the rapidly increasing demand; and another building that will seat 300 is to be completed by October. West Denver and North Denver will each build immediately, the former for about 400 and the latter for about 200 scholars. It will be seen that Denver is not indifferent to school interests.

INDIANA.—Miss Carrie H. Fuller, of Worcester, Mass., has been offered the position of instructor of vocal culture in the public schools at Fort Wayne, Ind., at a salary of \$1,400.

The city school superintendents' held a meeting at Indianapolis, in May, and discussed many questions relating to their special work. They passed the following resolution—the same in effect as that adopted by the Illinois Society of School Principals.

Resolved, That we, the members of the Convention of Superintendents of the High Schools of the State, respectfully represent that we fully approve of uniting the High Schools with the University by the plan proposed, viz: That the High Schools shall prepare pupils in Orthography, Writing, Reading, English Grammar, Geography, Arithmetic, Physiology, United States History, Algebra, Geometry, Latin, Grammar, Cæsar and Virgil, which shall admit them to the Freshmen class without the necessity of preparing them in the study of Greek; and that the study of the advanced mathematics contemplated herein be considered an equivalent for the amount of Greek now required for admission.

Resolved, That Mr. A. M. Gow present the resolution above to the Trustees of the University, at their meeting in June, as the expression of our views.

MR. H. WILEY has been re-elected Superintendent of the Terre Haute schools at a salary of \$2,500 per annum. This act is commendable in the Board, and highly complimentary to Mr. Wiley. Only one other superintendent in the State receives a higher salary than this. Mr. Wiley ranks among our leading educational men.

ILLINOIS.—Herewith we present as far as we have heard the times and places of the institutes and drills in Illinois during the summer. The information in every case is by letter from the county superintendent. The warm thanks of the SCHOOLMASTER are due the gentlemen for their kind and prompt reply. We can be useful to our readers in proportion to the help of this kind we receive from the various counties.

Putnam County—A Normal Institute will be held in Hennepin, commencing July 7 and continuing two weeks. Prof. E. C. Hewett, John W. Cook, Misses C. A. Cochran and Beatrice Fyffe with the county superintendent are the instructors.

A. N. DURLEY, Co. Supt.

Perry County.—The county superintendent, Mr. B. G. Roots will hold a session during the summer, the details of which are not determined as we go to press.

Moultrie County.—The county superintendent, Mr. D. F. Stearns will conduct a six week's Normal School at Sullivan, commencing August 9th.

Mercer County.—It is probable that local institutes commencing the middle of July, each continuing about two weeks, will be held at three or four accessible and convenient points in the county. Instructors not yet engaged. F. W. LIVINGSTON, Co. Supt.

Montgomery County.—The Normal Institute will be held in the school-house at Litchfield, beginning July 28th and continue five weeks. Able instructors have been secured. H. L. GREGORY, Co. Supt.

Hancock County.—Both institute and drill will be held in this county. Drill begins July 28th. Institute August 26th. Four weeks are allotted to the drill; four days to the institute. Instruction by the county superintendent and teachers of the county. WM. GRIFFIN, Co. Supt.

Adams County.—The annual session of the Institute will be held at Camp Point, Aug. 26, and continue in session four days. No special instructors have as yet been engaged. JOHN H. BLACK, Co. Supt.

Peoria County.—We hold monthly institutes, the county Normal School taking the place of the institutes and "drills" of other days. The natural sciences have engaged the attention of our last two meetings. Our instructors, Dr Stewart in Botany, Dr. Brendel in Zoology and Entomology, and Prof. Frost in Geology. N. E. WORTHINGTON, Co. Supt.

Macon County.—A Normal Institute will be held at Decatur, beginning Aug. 11, and continuing three weeks. The county superintendent, and (——— not engaged), are the instructors. O. F. McKIM, Co. Supt.

Livingston County.—We shall hold an institute, to commence Aug. 5, at Pontiac, and continue two weeks. Have not fully determined who will conduct exercises. H. H. HILL, Co. Supt.

Williamson County.—An institute of four days duration will be held at Marion, sometime in September. A. N. LODGE, Co. Supt.

Logan County.—The Normal institute will be held at Lincoln, commencing July 14, and will continue four weeks. The school will be conducted by the county superintendent, the teachers of Lincoln University and Israel Wilkinson. L. T. REGAN, Co. Supt.

Springfield.—Our Institute met this morning. The roll call showed a full attendance. The devotional exercises were conducted by Rev. Perry Bennett.

The minutes of the last meeting were read and approved.

The Supt. James C. Bennett, Esq., then addressed the Institute. He stated that results showed that very few teachers had fallen below the required standard. Among other things that he had used, he regarded as the best, the programmes for daily recitations which were established by law, at the beginning of the present year. He advised those who had deviated from these programmes to carefully observe them during

the coming year, guaranteeing improvement if this was done. He also urged upon the principals of the schools a thorough acquaintance with the time and character of the work done in their schools. The principals were asked to advise with the Supt. and inquire into the expediency of finishing geography and U. S. history in the 2d grade, so that arithmetic and English grammar could receive more attention in the 1st grade. More oral instruction and explanation was called for from the teachers of the 1st grade.

The propriety of finishing geography and history in the 2d grade, was then discussed by Messrs. Brooks, P. Bennett and Willcut. The next exercise was a class in mental arithmetic, conducted by Rev. Perry Bennett, Prin. of the 2d Ward school, in which the pupils acquitted themselves quite creditably.

The President, Mr. Sampson, called the attention of the Institute to a Normal School to be held in Springfield during the coming vacation, by the Rev. Perry Bennett, commencing on the 7th of July.

Prof. Chamberlain of the high school then delivered an interesting lecture on a topic not very familiar to the ordinary reader. He sketched the rise and fall of the Holy Roman Empire, picturing the struggles between the papacy and the emperors.

Miss Tuttle of the high school, read a selection giving Gail Hamilton's experience with a worn out pair of boots.

Miss Jones of the same school, also read a selection on "Boys not allowed." The efforts of these ladies were well received by the Institute.

The Institute then adjourned to meet on the 1st Saturday of September.

McLean County.—A drill of three weeks at Bloomington, commencing July 28th. Dr. B. P. Marsh, the county superintendent John Hull, and one other instructor will conduct exercises.

Clay County institute will be convened on the 18th of August, and continue five weeks. Instruction chiefly by the county superintendent. C. H. MURRY, Co. Supt.

Pope County—We shall have an institute at New Liberty the last week in September next of four days duration. The best teachers of our county, and some educators from near by will be our instructors. THEODORE STEYER, Co. Supt.

Ogle County.—A drill is to be held this summer, commencing August 12, at Oregon, and continuing four weeks. The Co. Supt., assisted by P. R. Walker, J. H. Freeman and others, will be the instructors. E. L. WELLS, Co. Supt.

Crawford County.—The next session of the Crawford County Institute will be held at Palestine, commencing September 15th, and will continue five days. No instructors or lecturers are yet engaged. SAMUEL A. BARNES, Co. Supt.

Champaign County.—A drill will be conducted at Urbana in August by Profs. Taft, Metcalf and Burrell. The season will last three weeks. T. R. LEAL, Co. Supt.

Macoupin County normal school begins on July 21st at Girard, and continues six consecutive weeks. Prof. John D. Conley, Prof. C. W. Cushman, J. S. Kenyon, Esq. F. H. Chapman, L. R. Farris and S. S. Wood are announced as instructors.

F. H. CHAPMAN, Co. Supt.

Marion County.—An institute will be held the first week in September at Salem. The instructors are not selected. JAMES MCHANEY, Co. Supt.

Piatt County.—An institute will be held in this county at Monticello, commencing Dec. 1, to last one week. C. A. TATMAN, Co. Supt.

Cass County.—Mr. L. Emmerick proposes to hold a teachers' normal institute in Virginia, for one month, to commence next August, to drill on the natural sciences, etc. H. TATE, M. D., Co. Supt.

Whiteside County normal institute will convene for a seven week session at the public school building, Morrison. The requirements for admission will be a sufficient knowledge to secure a second grade certificate under the old law. The county superintendent without assistance will instruct the institute. M. W. SMITH, Co. Supt.

Fulton County.—The schools in this county are nearly all in session and are doing finely. The county superintendent, Mr. H. J. Benton, has visited seventy-five schools this summer.

Logan County.—This county has a greater number of nine month's schools than during any previous year. Still more encouraging is the fact, that school directors exercised more care last fall in the selection of teachers than ever before. During the winter thirty evening educational talks were given by L. T. Regan, the county superintendent. The schools of Atlanta and Mt. Pulaski have had a year of successful work under the superintendence respectively of H. F. Wegner and Wm. H. Derby.

Madison County.—Our schools are closing up finely, showing our teachers to have been doing good work. The schools and school interest never stood better in our county than it does at this time.

McLean County.—The public schools of Bloomington closed June 13. The graduating exercises of the high school took place in Durley Hall. Prof. Marsh, for five years principal of the high school, resigned. Dr. Marsh resumes the practice of medicine. The salary of the principal of the high-school has been reduced from \$1,800 to \$1,000, and Miss Raymond appointed to the position.

The public schools of Normal closed June 18. The teachers have all been invited to remain. The graduating class of seven ladies held its exercises in the Baptist church. Charles A. Bradley, a graduate of the class of '72 from this school, who received the appointment as cadet to West Point from this district after a competitive examination has passed the final test at the academy, and entered upon his cadet life. His letters home are full of encouragement to those who follow.

Bureau County.—Princeton high-school graduated a class of 18 on the 6th of June; seven young men and eleven young women. This is the largest class yet graduated. Five of the class were from other towns. Among them was a young colored lady from Peoria, who completed her course with credit, and was very much respected in the school and in the community.

A prize of \$100, equivalent to a good college scholarship, was raised by the citizens, and awarded to the pupils standing highest in the class, conditional upon his completing a full college course.

Henry L. Boltwood will conduct a class at the Princeton High School. (See advertisement.)

Joliet.—The fourth annual report of the public schools for the year ending March 31st, 1873, is in our hands. This has been prepared by Mr. Chas. I. Parker the Superintendent.

The population of the city is 10,315; number of persons between 6 and 21, 3,190. There are eight school buildings, twenty-eight teachers, 2,176 pupils enrolled, and 1,053 in average daily attendance. The entire cost per pupil for the year has been \$15 98

The schools have no reference books except Webster's Dictionary. McGuffey's *First Reader* is used for the whole of the first year; the *Second Reader* is completed in the first two terms of the second year, and the succeeding four terms are used on the *Third*. Some teachers have been employed at the salary of \$300 per year, a few at \$600. If we read the report correctly, the principal and janitor of the high school each receive the same salary, \$600.

We are not familiar with the local history of the public schools of Joliet, but from this report we infer that Mr. Parker's road is "hard to travel." The superintendent of Joliet must have nerve and pluck to present so good a front.

Aurora.—We take the following from a private letter. We have seen many such during the past two years. "I visited Powell's school in May. Take it as a whole, it is one of the best I ever visited. If persons desire to see systematic school work, I say go to Aurora. There is good thorough work, and in the right order. I never spent two days more profitably."

Pike County.—Mr. Pike, the Superintendent of the Pittsfield Public Schools, was presented at the close of the year with a watch by his friends. Among many good things that were said on the occasion, we take the following extract from the remarks of Mr. Pike:

"Our High School already numbers its representatives in almost every pursuit in life, from the young engineer in the field to the rising young lawyer at his desk, and I hope yet to see the day when the graduates of this school shall fill high places of trust and honor in every department of life. Again, I beg you to accept for yourself and the citizens you represent, my most grateful thanks for this beautiful testimonial of your esteem, and for the fact that you have thus seen fit to WATCH me in this, another anniversary of our schools.

In behalf of the Board of Education, the teachers and pupils, I extend to the audience sincere thanks for their kind presence and attention, and, wishing teachers, pupils and all a happy vacation, I must again say farewell."

The watch was a most elegant one, and the whole proceeding was an acknowledged tribute to Mr. Pike's career and labors as a teacher in Pittsfield.

Knox County—Yates City Public Schools.—The people of this place have shown a commendable zeal in educational matters. They have fitted up a fine building at great expense, which was completed last year. There are four departments in the school, and seats for 270 pupils. The greatest number of pupils in attendance during the past year was 218. There has been an average attendance of about 170. The

teacher of the First Primary Department is Miss Alice Cool. The Second Primary Department is under the charge of Miss Angie Riner. The next is the Intermediate Department, in charge of Miss Nettie Knable. The Grammar and High School Department is under the immediate supervision of Prof. A. C. Bloomer, who, as Principal, also has a general supervision of the other departments. He has now had charge of the school for four years, and has proved himself competent and efficient. It is with regret we learn that he intends to sever his connection with our schools this season. We believe this will be greatly regretted by our people generally, and we fear we shall not soon secure the services of another so thoroughly fitted for the place he has occupied so long and so well. Our best wishes attend him wherever he goes.

W. H. H.

Cass County.—The county institute was held in Virginia on June 5th and 6th. The attendance was good, and the exercises of such a varied character as to make the entire session one of interest. The following are some of the queries presented for discussion:

Query 1.—Are teachers required to teach the rules laid down in text-books, if so required by the directors?

2.—How old should pupils be before they should begin the study of arithmetic, and to learn to write? Replied to by Prof. Clark.

3.—Where do the days begin on the earth? Replied to by several.

4.—What is the true rendering of the first stanza of Longfellow's Psalm of Life?

5.—Should teachers be allowed time to attend teachers' institutes?

6.—Do parents take sufficient interest in the schools of this county?

7.—Should pupils be detained after school hours for any cause?

Docter H. Tate, is the efficient county superintendent of Cass.

The Thirteenth Annual Meeting of the National Educational Association will be held in Elmira, New York, on the 5th, 6th, and 7th days of August, 1873. Free return tickets are promised on the N. Y. & Erie and the other Railroads centering in Elmira. A cordial invitation to hold the meeting in that city has been received, signed by the Mayor and Aldermen, and sixty-five prominent citizens, including Judges, Editors, Presidents of Banks, Clergymen, Lawyers, and the Officers of Elmira College. A warmer welcome was never promised to the Association. No effort will be spared to render this meeting interesting and profitable. A large attendance is anticipated.

The morning and evening of each day will be occupied by the General Association, and the afternoon by the four Departments.

The Exercises will begin at 10 o'clock Tuesday, A. M. After very *brief* introductory exercises, the Association will proceed at once to business. No time can be spared for elocutionary or musical entertainments. To give time for the thorough discussion of the topics presented, the several papers which introduce each theme should be short, not occupying more than twenty-five or thirty minutes.

As an Educational Conference, this meeting should invite a comparison of views by Representative men from all parts of the country. To this end the discussions should be a prominent as well as attractive part of the exercises. The need of condensation and brevity is earnestly commended to all who take part in the proceedings.

GENERAL ASSOCIATION.—1. "Upper schools," by Dr. James McCosh, President of the College of New Jersey.

2. "How much culture shall be imparted in our free schools," by Richard Edwards, President of the Normal University of Illinois.

3. "Ought the Chinese and Japanese Indemnities to be refunded uncondition-

ally, or devoted to Specific Educational purposes? In the discussion of the question, Mr. Chin Laisum, of Shanghai, will speak of the New Educational Movements of China, and Prof. E. H. House, of the Imperial College of Tokei, (Yedo,) on "The New Educational Plans of Japan, and Hon. S. Takaki, Charge de Affairs, for Japan.

4 "Should American Youth be Educated Abroad?" by M. H. Buckham, President of the University of Vermont.

5. "Education in the Southern States," by Hon. J. C. Gibbs, State Supt., Florida.

6. "Co-Education of the Sexes," by President White, of Cornell University.

7. "The Relation of the General Government to Education," by Prof. G. W. Atherton, Rutgers College, N. J.

8. Educational features of the Vienna Exposition, Prof. J. W. Hoyt, Wis.

NORMAL DEPARTMENT.—"The Duties and Dangers of Normal Schools." Richard Edwards, President State Normal University, Illinois.

"Elementary and Scientific Knowledge." John W. Dickinson, Principal State Normal School, Westfield, Mass.

"Training Schools.—Their place in Normal School work." Miss Delia A. Lathrop, Principal Training School, Cincinnati.

A paper on "The relative contribution of scholarship and methods to the power of the teacher," by Henry B. Buckham, Principal State Normal School, Buffalo, N. Y.

The following questions are also presented for discussion:

"To what extent and in what ways ought a Normal School to conform its plans to the wants of the region in which it is located?"

"What should the Normal School aim to accomplish in the teaching of Natural Science?"

A. G. BOYDEN, Bridgewater, Mass., *President.*

DEPARTMENT OF HIGHER INSTRUCTIONS.—1. "National University," by Charles W. Eliot, President of Harvard University.

2. "Study of the Classics," by Prof. Edward S. Joynes of the Washington and Lee University of Virginia.

3. "A Liberal Education for the Nineteenth Century," by Prof. W. P. Atkinson of the Institute of Technology, Boston.

J. D. RUNKLE, Boston, *President.*

DEPARTMENT OF ELEMENTARY SCHOOLS, N. A. Calkins, New York, *President.*—Two papers on "Elementary Reading." 1. "Thought and Sentence Method," by G. L. Farnham, Superintendent Public Schools, Binghamton, New York.

2. "Phonetic Method with Pronouncing Orthography, in its relations to other Methods," by Dr. Edwin Leigh.

Discussion of the subject to follow the last paper.

3. "Arithmetic—Principles and Methods of Illustration," by M. McVicar, Principal of the State Normal Training School, Potsdam N. Y.

4. "How may the Elementary School Instruction be made most useful to the future citizen?" by H. F. Harrington, Superintendent of Schools, New Bedford, Mass.

5. "What number of School hours, daily, is most profitable for children under ten years of age?" by Andrew J. Rickoff, Superintendent of Schools, Cleveland, O.

Question for Discussion.—"How may pupils in Elementary Schools be trained to speak and write our language correctly?"

DEPARTMENT OF SUPERINTENDENCE, W. T. Harris, St. Louis, President.—Details soon to be announced.

The Hotels reduce their rates to members of the Association about one dollar a day, as follows: at Rathbun House, \$3 per day. Frazer, Delevan and Hathaway, each \$2.50; the Lyon House \$2.

BIRDSEY GRANT NORTHROP, President.

S. H. WHITE, Secretary.

The Polo school in charge of J. H. Freeman, gave its annual public exercises on the 13th of June.

P. R. Walker at Rochelle, is causing Botany to be taught orally in every grade, with good results.

Will Smith who has been teaching at Tonica, La Salle county the past year, has left the profession. The same old story—greater financial inducements. Mr. Smith graduated from the Model High School under W. L. Pillsbury, and had he continued to be a schoolmaster, would have been a power. He could not afford to remain.

He has formed a partnership with his father Mr. B. Smith of Normal, for the manufacture and sale of Knowlton's Adjustable Bath.

ILLINOIS NORMAL.

The term just now closing, has been one of the most pleasant and profitable that the University has ever enjoyed. A very good degree of health has prevailed; there have been harmony and good feeling in all departments; and not the least important—there has been a great amount of hard work done; and faculty and students may well congratulate themselves on a pleasant close to a profitable year. At this writing, we cannot speak of the results of the examinations, commencement exercises, the meeting of the Alumni, nor the annual dinner; but the prospect is good for the success of all of them. It is expected that twenty five will graduate; three being members of the high school. Of the twenty-two from the normal school, one-half are ladies. Fifteen are expected to present essays and orations on commencement day, including one from the high school. Of the fourteen from the normal school, twelve receive the honor in virtue of their standing. To determine this standing, the scholarship record, the deportment record, the record of class teaching in the model school, and the mark of the closing theme are averaged equally; the records are taken for the pupils' entire course of study. The Salutatorian, Mr. Charles DeGarmo, is elected by vote of the Faculty; and the Valedictorian, Miss Mary Hawley is elected by her class-mates. The annual dinner is to be conducted as last year; and a good time is expected. A full attendance of the Alumni is expected; many being in town at this time.

Miss Osband, the preceptress, will close her connection with the institution with this term; we hear that she has reasons of her own for this step. Otherwise, the faculty will remain unchanged, so far as is now known. It is expected that substantial repairs to the building will be made this summer. By all means, it is to be hoped that provision will be made for *ventilation*; the present lack in this respect is a disgrace to the state. The grounds of the University now present a very fine appearance; the trees

have attained sufficient size to be a very attractive feature; few institutions east or west can boast of pleasanter grounds than ours has, and is likely to have.

The village of Normal, also, has donned its summer dress; and its comfortable homes are almost hidden in their deep bowers of shade. But little building is going on in town. Colman & Squirers' new elevator, the new hotel, and a few dwellings include the whole. The town has just experienced another sad loss by fire. On the 30th of May, about four o'clock in the afternoon, fire was discovered on the west peak of the Congregational Church; and, in a few minutes, the church and the neighboring parsonage were burnt to the ground. The organ, cushions and furniture were saved from the church; and most of Mr. Leonard's furniture and books were also saved. A festival was to have been held that evening, and a fire had just been kindled in the west furnace; it is supposed that a defective flue was the cause of the disaster.

The public schools closed on Wednesday, the 18th of June. The Senior class of the High School, composed of seven young ladies, held their commencement exercises in the Baptist Church. Their essays, both in matter and in delivery, and the music on the occasion, were well spoken of by all who heard them. The class held a very pleasant reception, in the evening, at the house of the principal.

Miss S. E. RAYMOND has been appointed Principal of the Bloomington High School.

Mrs. Joseph Carter, JENNIE PENNELL, is candidate for County Superintendent.

GEORGE COLVIN, GEORGE MASON and most of the other Normal teachers will return to Pekin next year.

ROBERT CHILDS will close his successful labors as teacher at Amboy, with the present year.

ED. JAMES, of the present senior class in the high school, will enter Harvard next term.

DUFF HAYNIE and WILL BURRY, will complete their course at the same time-honored seat of learning, next year.

The reports from our Normal workers in the field are generally good. Still in some cases that have come to our knowledge, young pupils who have been in the Normal, have injured or destroyed their influence, and have brought odium upon the University, by their assumption of superiority over other teachers, by their boasting, and other displays of a lack of common sense. Generally, those who have erred in this respect have been such as have spent but a very short time in the University; and, in some cases, have left by advice of the faculty. They have, however, assumed to speak for the Normal; and, in many cases, other people have not known how little ground they had for the assumption. It would be well for *all* Normal students, when they go out to teach, to heed, somewhat more than many do, the advice that President Hovey used to give so laconically: "Keep your own counsel;" "Keep your mouth shut;" "Hold your tongue."

NOTES.—Botanists are engaged in planting in Europe a new plant imported from New Granada, which, if grown successfully, will be a formidable rival to our manufactured ink. It is known as "*Coriaria Shymifolia*," or ink plant. The juice which escapes from it has been given the name of "*Changi*," and is a little red in color, but in the space of a few hours after exposure to the air turns to an intense black. This liquid

does not corrode steel pens as the ink in ordinary use, resists chemical substances, and preserves its intensity for many years.——The Massachusetts association of classical and high school teachers recently discussed the question of single and double sessions in high schools, and voted by a good majority that the single session was preferable. The chief argument was that all great scholars and literary men did all their work for the day before dinner. The association also talked about the expediency of enlarging the range of the requirements for admission —— It is announced that Oakes Ames, in his will, left the income of \$50,000 in seven per cent. railroad bonds, to be used for the support of schools, in district number seven, in North Easton —— It is said that the highest land in the southern peninsula of Michigan, is a plateau in Jackson and Hillsdale counties, 646 feet above Lake Erie. On this plateau, are 100 small lakes, and from them the Huron, Raisin, St. Joseph, Kalamazoo and Grand Rivers, all take their rise.——Professor Momsen, the author of the History of Rome, was beaten and robbed near the city of Naples, on the evening of May 16th. He had gone to a neighboring forest to enjoy the moonlight evening, with a few friends.——The *Inter-Ocean* newspaper of Chicago, proposes a series of excursions for the poor children of that city, similar to those begun in New York, two years ago, by the *Times*. The *Inter-Ocean* will at once arrange for the first one, to which it gives \$1,000.

BOOK TABLE.

Annual Report of the St. Louis Public Schools, 1871-2.

Of the school reports that come to us, few are more thoughtful, more suggestive, or more sensible and practical in dealing with educational questions than the annual reports of the St. Louis Schools. The one now before us for the year ending August 1, 1872, is in no respect inferior to those of preceding years. We have read it with much interest, especially those portions treating of the evils of the graded system, the best method of promotion, the claims of the high-school, the public school library, and other topics which are attracting the attention of all thoughtful teachers. Superintendent Harris has little admiration for the "Procrustean bed of grades," which is far too common in some of our city schools.

The remedy which he proposes for some of the evils of the system, is worthy the consideration of all who believe that there is still room for improvement in this direction. The suggestion that promotions should be made more frequently, especially in the higher grades, is a good one. Under the rule of the St. Louis school board, examinations for admission to the high-school, are held quarterly, and thus the pupil who barely fails to gain admission at any examination is not obliged to spend an entire year on work that is already, to a large extent, familiar to him, and that has therefore lost much of its freshness and interest. The argument for the high-school is forcibly stated, and we would commend it to those who think that education at public expense should be confined to the primary school.

Mr. Harris believes that "the system of corporal punishment generally employed is likely to go out of use altogether before the close of the century." We should be

glad to think that such a happy condition of things is about to be ushered in that it would be best for the schools to banish corporal punishment from the school room. But we fear that it will require a more rapid increase of moral power in teachers or in pupils, or in both, than we are likely to see before the close of the century, in order to render such an event really desirable.

The evening schools and the public school library supplement most effectively the work of the regular day school. The public school library, containing nearly thirty thousand volumes, is an invaluable auxiliary in the work of education. It is so connected with both the day schools and the evening schools as to encourage and reward fidelity and industry among the pupils. The attendance upon the evening schools has nearly doubled through the offer of five memberships in the library to such as attend regularly and punctually, and are industrious in their studies.

The statistics presented in the report indicate a healthy condition of school affairs. If we may judge of the character of the work done, from the contents of their school reports, the people of St. Louis have good reason to felicitate themselves upon the wise management and the successful operation of their school system.

Landscape Architecture, by H. W. S. CLEELAND. JANSEN, MCCLURG & Co., Chicago. 147 pp. Price, \$1.50.

The main object of the author, in this little book, seems to be to show that in making the *original plan* for private grounds, and for towns and cities, the services of an experienced landscape artist should be called into requisition instead of his being summoned merely to aid in the work of ornamentation, as is so often the case. He attacks unmercifully, and with good reason, the stupid custom of laying out all our towns and cities on the rectangular plan. He deals, also, with the arrangement of city parks, in a very sensible way. The latter part of the book is devoted to the subject of tree-planting on the great western prairies. The book is full of good sense, and of timely and practical suggestions; one is inclined to apply the philosophy of Mr. Sam Weller to it, and "wish there was more of it.

Turning Points in Life. By REV. FREDERICK ARNOLD, B. A. HARPER BROTHERS, New York. JANSEN, MCCLURG & Co., Chicago.

We have been pleased and instructed in reading this volume. As the title indicates, it is especially adapted for young people, and yet, there are none too old to profit by its perusal.

It contains much that is truly English, and refers particularly to the career of English youth. Among the terse, pointed statements are these: "A great occasion is worth to a man exactly what his antecedents have enabled him to make of it;" p. 10. "Scruples are often the advanced outposts of conscience;" p. 14. "The soul when a sudden demand is made upon it for a decision instinctively throws itself back upon its past experience, and answers the demand in precise accordance with the habits of its essential life;" p. 44. "There is a time in the days of youth when the mind is full of active fermenting thought, and seems to wait for the impregnating moment that shall fertilize it;" p. 46. From these quotations one can see something of the admirable way the author has of saying things. We wonder at his position as shown in the following from p. 93: "There appears to be no valid objection why the clergy should not practice as doctors or surgeons." It may be true that a clergyman of the church of England can-

not profitably employ every moment of his time to his profession, but it is evident that the clergymen in this country who find time for permanent pursuits foreign to their professions, are not the preachers or pastors the people most revere, respect or love. The author on p. 94 says: "Still I am afraid that to deserve success and to attain it are hardly synonymous terms." Had Mr. Arnold lived in this county the statement would not have been qualified by the word "afraid."

Annual Report of the Board of Education of Connecticut. B. G. NORTHOP, New Haven, 1872.

Among the volumes of educational literature which it has been our privilege to possess, we have no one that we prize more highly than this. We shall take occasion to quote freely from it hereafter, for Mr. Northrop has much to say that is as good for Illinois as for Connecticut. We wish our legislators and other public, educational men would take much pains to secure and read books of this sort, for then we should have fewer laws to unmake and fewer blunders to atone for; it would be easy to profit by the experience of this wide-awake New England State. The essay on Obligatory Education is one of the best. On the subject of Illiteracy, Mr. N. says: "The figures of the census tell their own story. The illiterates of New England are mainly foreigners and their children."

Select German Stories with Copious Notes, BY GEORGE STORME. Chicago, H. ENDERIS, 1873.

This little book is prepared in a somewhat new style for the young student of the German Language. It is filled with short stories. Each new word is defined by a foot note at the bottom of the page on which the word occurs. One can hardly fail to translate into English, for the method is easy. The question that occurs to us is, "Is it not too easy?" The publisher thus ends his preface. "The fact that the Board of Education of the city of Chicago has, after mature deliberation, adopted this work as a textbook in our public schools, will, perhaps, serve as its best recommendation."

The American Educational Readers, IVISON, BLAKEMAN, TAYLOR AND COMPANY, New York and Chicago.

The First, Second, Third and Fourth Readers of this new series are in our hands. We have looked through them somewhat hastily, but are convinced that they are excellent. The claim which the publishers set forth,—that they are carefully arranged with reference to gradation is pre-eminently true. They are tastefully published and reasonable in price.

The *First* contains 64 pp.; the price 25 cents. "The first six lessons are designed chiefly to teach the LETTERS of the alphabet." The engravings are new and modern. We are glad to see the punctuation marks placed early, on the 13th p. We do not approve of the inflection marks that occur frequently after their first appearance on the 17th p. The pronouncing exercises on p. 42 are the right thing in the right place. Some idea may be had of the illustrations that are in this First Reader when we say that in the 64 pp. are ninety-eight pictures, and that but two pages have none, the 42^d and 63^d.

The *Second* contains 124 pp.; the price 40 cents. It is nicely illustrated. We like the questions, especially those calling attention to the pictures.

The *Third* contains 160 pp.; the price 50 cents. This has an introduction con-

taining principles, rules and exercises, sounds of the vowels, etc., of 14 pp. The table of contents divides the titles of the lessons into those in prose, in poetry and in dialogue. The poorest selection, to our mind, is that on the 131 p., from Henry Ward Beecher. To hundreds, however, the introduction of this author will be a merit. Mr. Beecher's sentences are not likely to improve the child's style. The list of common errors on p. 12 is excellent. Every one given is a common error; every teacher will fully realize the good judgment of the compiler; such lists often contain absurdities. The first lesson in script occurs on the 78 p. We wish it could be moved back to the first part of the *Second Reader*. We find but one other in the book,—on the last page. The script lesson would be more in place in the *First Reader*, certainly not later than the *Second*, and then there should be many of them.

The *Fourth* contains 240 pp.; the price is 70 cents. The first 22 pp. are devoted to introductory work, similar to that in the *Third*, but more advanced. It is good in arrangement and selection. We like the first four books of the *American Educational Readers*.

BOOKS AND PAMPHLETS RECEIVED.

Structure of the English Language, JOHN MULLIGAN A. M., New York, D. APPLETON & Co. P. B. Hulse, Chicago.

A Fourteen Week's Course in Chemistry. Revised Edition, with the new nomenclature. J. DERMAN STEEL, New York and Chicago. A. S. BARNES & Co.

Catalogae of Otterbein University, 1872-73, Westerville, O.

Catalogue and Circular of the Classic Institute, Morris, Illinois, 1872-73.

Fourth Annual Report of the Public Schools of Joliet, Ills. CHAS. I. PARKER, SUPT.

Thirteenth Biennial Report of the State Hospital for the Insane, 1873. HENRY F. CARRIEL, Supt.

PERIODICALS.

The Popular Science Monthly contains articles in every number that will be of great interest and value to every thoughtful teacher. The number for May has an article on "Instinct in Insects," that abounds in curious information; it alone is worth the price of the book. Herbert Spencer's article on the "Class-Bias," in which he discusses the questions of Labor and "Strikes," presents some thoughts that are of special weight just now. Another very noticeable article is Parke Godwin's letter to the editor, in answer to strictures, in the April number, on Mr. Godwin's speech at the Tyndall banquet. It seems to us a calm, clear and masterly presentation of the "orthodox" side, in the supposed controversy between science and religion. There are many more articles of great worth; but we think these possess special interest for such teachers as desire to keep abreast of the current questions of the day.

Peterson's Magazine.—A charming recreation is the "Peterson." The instruction of all varieties for the useful as well as ornamental in the house-hold, completes our admiration, and meets our necessities. You can always find some-

thing of interest, and few magazines combine more of pleasure and profit. The stories are from authors of acknowledged ability—and the editor's table, gardening department, mothers' corner, and fashion details each in turn, render their assistance.

We think \$2 00 a year well spent for "Peterson."

The Alumni, the magazine of the Wesleyan University at Bloomington, is improving rapidly under the editorial care of Professors Potter and DeMotte. We think the last number is the best one we have seen; the articles in the body of the book, as well as the editorials and extracts, are instructive and entertaining.

The *Iowa School Journal* for June kindly copies two pages and a half of brevier from the May SCHOOLMASTER and gives us credit. We are thankful; that item cost us a trip to Chicago and several hours' work. The same number of the Journal in speaking of our contemporary edited in Chicago, says: "The teachers of Illinois may be congratulated upon having at last a journal that promises to amount to something."

The Western, St. Louis, Z. G. Wilson editor, E. F. Hobart, publisher. This is a two-dollar monthly in price and worth. Supt. Harris of St. Louis, has gathered about him the brighter lights of the profession. The schoolmasters of that city stand in scholarship and reputation among the highest in the country. *The Western* is a proper exponent of these gentlemen.

The *Conn. School Journal* for June makes a fine appearance typographically, although as our *confrere* expresses it, we are not partial to "tainted" paper. The editorial is plain talk; the editor will certainly not be accused of masking his battery. We should on some accounts, like to comment on the article in question, but we have bit our lips and kept still so long but think that now after a year or two has passed, we shall be cool enough to speak. For the present, for the sake of the profession and our own temper, we are speechless.

The *Pennsylvania School Journal* is one of the best of our exchanges. We have not changed our mind since we wrote the notice in the April SCHOOLMASTER.

The *Michigan Teacher* is published and edited at Niles, Michigan, by H. A. Ford. It affords to the teachers of Michigan, a State teachers' monthly worthy of all patronage. It is the opposite of some of its neighbors in pretensions and modesty and correspondingly increased in worth.

Indiana School Journal, W. A. Bell, publisher and editor. This is a live institution. It has probably the greatest increase of circulation for the last year of any school journal published. It deserves it. Formerly the SCHOOLMASTER had a fine circulation in *Ind.* It has "gone where the woodbine twineth," or else the names have been transferred to Mr. Bell's books. We hope and believe, the latter.

The *New York State Educational* for June is bright and scholarly. Mr. O. R. Burchard of Buffalo, is the controller, assisted by six prominent teachers from Rochester, Buffalo, Elmira and Manlius. Mr. Bateman's "testimony" is reprinted in this issue. We do not yet see the gain that is to come from advertising our faults. It seems as though there were enough enemies of free schools to do that kind of crying. We believe in criticising to the utmost extent our school systems, but do not care to put weapons in the hands of those who will use them to injure us.

PUBLISHERS' DEPARTMENT.

The Blackboards made by J. Davis Wilder have no superiors in the county. The list of recommendation which Mr. Wilder can furnish, includes the most reliable names in the country. We know of no one institution for which we hear such universally expressed approbation, as we do for the blackboards prepared by J. Davis Wilder.

AUGUST 1st, 1872.

UNIVERSAL BATH.—During the short time I have had the "Universal Bath," purchased from you, in use in my family, I have found it to answer your recommendation fully. We have now neither desire nor need for a bath-room with its costly fixtures, as this is a perfect substitute, at one-tenth of the expense. It is portable, and can be used in any room of the house; it is soft and pliable, and can be easily adjusted to the various forms of bath, and when not in use it does not require a separate room to store it away—it can be hung up behind the bed-room door. In a word, I am satisfied that it is really a good thing, being a better and cheaper bath arranged for family use than any stationary one.

Yours,

C. GRANT,

Circuit Judge, Morris, Gundy Co., Ill.

UNIVERSITY OF MICHIGAN,
ANN HARBOR, Sept. 18th, 1868. }

The Universal Bath is both simple and ingenious, and exceedingly convenient. With almost no trouble, a person with one of them can enjoy all the benefits and luxury of a bath—not confined to a bathing room—but wherever a person wishes to use it. But little water is required, and it is easily emptied, and when not in use it may be hung against the wall, occupying but little space. With this ingenious arrangement, I do not see why every family may not practice cleanliness, which is next to godliness, and enjoy the invigoration and pleasure of a daily bath.

E. O. HAVEN,

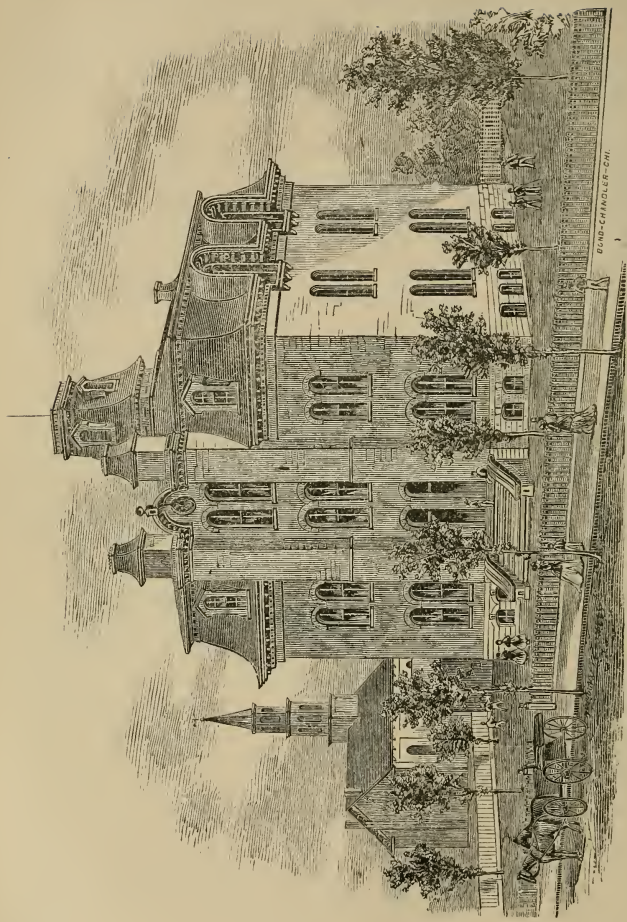
President of Michigan University.

WORCESTER VS WEBSTER.—A friend has been estimating (with no doubt a close approximation to accurate result) the comparative number of words defined in Worcester's Comprehensive Dictionary—[retail, \$1 80]—and Webster's Academic Dictionary—[retail, \$2.20]. While we have not the slightest wish to disparage the merits of the so-called Webster's Dictionaries, we nevertheless think it right to lay before your readers a few facts for consideration. This gentleman found, by counting the actual number of words defined on the 50th, 100th, and each 50th page thereafter, in each of these two books; taking an average of these amounts and multiplying by the number of pages in the vocabulary of each book, that the number of words defined in Worcester's Comprehensive Dictionary exceeded the number defined in Webster's Academic by just 13,987 words—and that for 9-11ths of the price. Now, while we do not of necessity value either book solely on account of the number of words defined; yet, as the advocates of Webster frequently endeavor to make strong point in favor of their book, by calling attention to the vast number of words therein defined, it is only a matter of simple justice to the publishers of Worcester's Dictionary to note the fact above stated.

X. Y.

UNIVERSITY OF ILLINOIS

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Public School Building, Polo, Illinois.

ILLINOIS TEACHER, {
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER,
Volume VI.

ILLINOIS SCHOOLMASTER.

A JOURNAL OF EDUCATIONAL LITERATURE AND NEWS.

VOLUME VI.

AUGUST, 1873.

NUMBER 63.

MUD PIES.

“I resign my honors most gladly,” said Flora, giving her school-keys to Miss Annie. “I don’t fancy school-teaching much, any way; but I believe I could have stood it a little longer, if it hadn’t been for that creek,” she added, pointing to the stream at the foot of the knoll on which the school-house stood; “it’s the very plague of my life. You need not stare,” in answer to Annie’s wide eyed look of wonder, “it just is; the children are bewitched with it, and away they rush, the moment they are let out, at recess or noon; and it’s the hardest work in the world to get them back when the bell rings; and when they do come they are mud from their head to their heels; I think some of it strikes through to the brain, too, such a stupid set as they are!” Miss Flora, clear out of breath stopped, and Annie inquired, “What do they do there?” “Do! I don’t know, except make guys of themselves; make mud pies, I presume,” and the fine lady fluttered her flounces in utter disgust. “Do you ever help them?” asked Mary. “Help them! help them play in a mud puddle!” The eyes opened wide and the be-ringed hands went up in holy horror. Just then the carriage drove up to take Flora away, and Mary rang the bell for school.

In came the scholars, just such sturdy, barefooted boys and sun-browned girls as you and I have often taught. “Not stupid looking by any means,” Mary thought; “brim full of the irrepressible energy of the ‘universal Yankee nation;’ and it depends on the teacher whether this energy shall develop into study or into mischief.” The thought of

directing this surplus energy never entered Miss Flora's curly pate; all she thought of was to *repress* it. Of course she failed, and in a fit of desperation, she gave up the school to Annie.

That first morning passed, as most first school days do, the scholars' time being about equally divided between study of their books and of their new teacher. When the geography class was called, they made some queer blunders; as, "An island is a portion of water extending into the land," and "A cape is a point of land entirely surrounded by water." Miss Annie smiled and said; "At noon, we will try to find an island and a cape and see what they are like."

Lunch was soon dispatched, and off the children scampered to their beloved play-ground where Miss Annie soon joined them. The stream was a pretty one, winding around in wayward fashion, forming the boundary between prairie and woodland. The children were "up to their eyes in work," (and in mud too), the girls in moulding mud images, which to worship would have transgressed no commandment in the decalogue, and the boys, in building a mud dam. They worked hard, but their success was hardly commensurate with their efforts; I think the trouble was not so much in the boys, as in the material. Our prairie State, indulgent mother as she is, don't furnish stones with which her pocket-edition citizens can build dams, and mud is not a very sure dependence, in running water.

"I've come to look for that cape and island we could not find in our geography lesson," Miss Annie said.

"Oh! but they're in the ocean," said Molly, "a cape is a point of land extending into the sea," she added, proved to show she had learned something since missing in the mornigug.

"Would not it be a cape if extending into any other body of water!" Molly was in doubt, but Jessie, taking the cue, exclaimed "Course it would; ma's cape's a cape, and my cape's a cape; though one's big and the other's little."

"Then a point of land extending into our Cedar Fork is a cape?" interrogated Miss Annie. "Yes, and I know where there's a *beautiful* one," cried Fanny, bounding away, and the rest all followed. Just round the hill the creek made a turn, and there, jutting out into the water was a cape, "just as good one as was ever in a geography book," Mary said. "Isn't it funny to have a real, sure enough cape

right under our noses, and we never know it," said Carrie. "I wonder if we cannot find anything else out of a geography book," said Miss Annie, casting her eye down stream, where the waters spread out into shallows, embracing a minnie island on their bosom, where an elder-bush was growing. "An island," exclaimed the now open eyed children. "A baby island, with a baby tree on it."

Instead of the black loam of their mud pie formation, the "cape" on which they stood was covered with sand, "not nice and white like sea sand, but cleaner than mud," Annie said to herself. She took a stick and began marking in the sand, the children eagerly watching each stroke. "See! see!" broke from them in delighted chorus, "she's drawing our creek, there's the cape and the island and the hill and the school-house." Sure enough, there they all were, not so artistically done but that each child thought she could do the same, but so plain that each recognized the picture.

Straightway a dozen little sticks, in a dozen eager hands, were tracing the familiar outlines. If Miss Annie suffered any qualms of conscience as to nipping in the bud any genius for sculpture showing itself in the modeling of clay statues, she consoled herself with the thought of the possible painters she had started on their grand career by these drawing lessons in the sand. Nor were they confined to the sand; soon, slates and paper were brought into requisition, and before school closed, the walls of the old school house were ornamented with well executed sketches, made by the children. But these drawing lessons were only incidental, geography was the main business in hand; subsequent explorations discovered promontories, peninsulas, gulfs, straits and lakes, and these definitions, as well of those of cape and island, were stored away in the children's minds among the unforgettables.

Meanwhile the progress of the dam was not very encouraging. Each night washed away the greater part of each day's work. The climax was reached on a Thursday night when a terrible thunder-shower carried away every vestige of their cherished mill-dam. A "blue" looking set of boys gathered on its site Friday noon. "Let's give it up," said Ned, disconsolately. Evidently he had lost all hope, and as he usually had a much larger supply of that commodity than any one else, you can imagine the state of his fellows. "Oh! I would'nt,"

said Miss Annie, who had come up unobserved, "the beavers can teach you how to build your dam." "But who ever saw a beaver, to know how they do?" said Charley, too thoroughly discouraged to entertain any new idea.

"I never saw one, but I can tell you how they build their dams; let us go over there in the shade, and I'll tell you." They crossed the foot-bridge, and climbed the wood-covered hill beyond. Seating herself on a fallen tree, while the boys gathered round her, Miss Annie opened a basket she carried, saying: "I feared the storm had washed away your dam, and so brought something which may help you in rebuilding it. The boys eyed the basket, uncertain whether to expect from it a spade or a pile driver. She brought out neither, but a dainty skeleton head, the head of a beaver. "If we haven't seen a beaver we can learn from his teeth how he works. Look at these back ones; the enamel—this hard white stuff which is all on the outside of ours—is here, you see, in layers, standing on end, with the ivory between. The ivory wears out fastest, leaving the enamel always with sharp edges—self grinding knives these back teeth are." "Don't I wish our reaper and mower had that kind of knives," broke in Tom, a martyr to the grindstone. "Cannot you invent some," said Miss Annie laughing; "here is a hint for you. I wonder some Yankee has not acted on it before. But the strangest things are their front teeth—rodent or gnawing teeth we call them, and class animals which have them together, and call the class Rodentia. Bats, squirrels, and ever so many more animals belong to this class. See what a queer shape they are! curved in such a way they could not tear a piece of meat, but exactly adapted to gnawing. But the strangest thing about them is they grow continually, just as fast as they wear out. If one is broken out, the opposite one, not having anything to rub off against, keeps on growing, till it pierces the other jaw, whenever the animal tries to shut its mouth. I once saw a rat with such a tooth. This skeleton is so dry I can draw these rodent teeth out their full length," and she drew and drew till the tooth lay in her hand, a perfect semicircle, three inches from tip to tip. "With teeth like that it is not so wonderful that the beaver can cut down trees," continued Miss Annie, when the boys had thoroughly examined the head. "Trees! Miss Annie, you don't mean big trees! such a little head as that!" cried Jacob. "Yes, see here," and she

drew from her basket a piece of wood, bearing marks of beaver's teeth. "They cut that tree down, and you see from this section it must have been as thick as a man's body." "What for?" And Miss Annie told them the wonderful way in which beavers build their dams, felling the log to lie across the stream, cutting and sharpening stakes which they set in two rows, as firm and true as any pile driver could set them, and filling up the interstices with woven bows, packed firmly with mud and gravel. "But could they build a dam long enough to reach across Cedar Fork?" asked Tom, the doubter. "The creek is about twelve feet wide here isn't it? I think the beavers could manage it; they often build dams a hundred feet long and twelve feet thick at the bottom." Tom looked crest-fallen, but Ned, fired with zeal not to be so badly outdone by the beavers, sprang up, exclaiming, "Let's us."

"Let's what?" asked Bob. "Let's build a dam, the way the beavers build. Why had'n't we sense to think of that way before."

And so the dam was builded, and so the boys learned a lesson, both in dam building and in patient continuing in endeavor, from the beavers.

Nor was it the only lesson they learned. "I say, Miss Annie, have you any more heads with the meat all off?" asked Tom one day, after an animated discussion of the beaver question. "Yes, ever so many. I'll show them to you, one at a time so you will not get them mixed." So, day by day she brought skeleton heads, which she had collected and prepared for this special purpose, making the children understand how from the structure of an animal's skull and teeth you can learn what it lived upon, how it obtained its prey, and ever so many more things, quite enough to classify it accurately. She had a sheep's head as an example of Ruminantia, a hog's head, of Pachydermata, a dog's head of Carnivora; heads of birds, reptiles and fishes. And she so explained the peculiarities of each division that before winter the smallest child in school knew the classifications of the animal kingdom, and was interested in its study. Thus did Miss Annie utilize mud pies and mill-dams, transforming them from the nuisances of which Miss Flora complained, into stepping stones by which she reached the hearts and minds of her scholars.

MARY ALLEN WEST.

THE EFFICIENT AGENCIES IN SCHOOL GOVERNMENT.

Government in its perfection must come from the consent of the governed. Its mission is to develop manhood and to bestow universal blessings on all its subjects. To accomplish this, order and liberty become its immediate aims : order to secure method, system, results ; liberty to give the broadest scope to human faculties and worthy effort. The efficiency of any government depends upon the acquisition of these objects. Of these, order may be said to be the chief, and liberty of conscience, speech, and action, invariable accompaniments.

The school stands as a connecting link between family and civil governments. It supplements the one and forms the foundation of the other. So intimate is this relation, that its very being depends upon the patronage of family, and its value and perpetuity upon the support of the state and nation. Successful or unsuccessful, it casts a reflex influence on its source, and aids or hinders the administration of civil power. The school is no passive force. It increases or lessens intellectual desire, limits or extends the range of passions, tones and elevates, or blunts and degrades every faculty of the child. The school is a wonderful accumulation of latent power. For the development of this power the teacher stands voluntarily responsible. Other positions of honor and trust seek chosen parties, and if not accepted, fine is exacted ; but there is no compulsory teaching.

The double task of meeting expectation and requirement makes every matter pertaining to school of intense interest to teachers. Educational bodies, large and small, have, during the last decade, discussed almost every phase of the wide range of school topics, producing a revolution in public sentiment truly astonishing.

Prominent among these have been the subjects of matter and method ; and so thorough has been the discussion, and so great the demand for new and better ways, that almost every school in the state shows manifest improvement.

Nor are we less surprised at the importance lately given to subjects of discipline and moral culture of schools, as set forth by the various associations of the state, and especially this one. The age

that gives us reform schools and humane societies may well suggest something more refining than unsightly places for culture, and means more potent for discipline than the rod. We feel that we are drifting into the channel of inquiry for moral goodness, and it is a good indication. We know we are tending daily to a better acquaintance of the workings of the unseen forces in the scientific world, why not in the moral and spiritual. The special work of the teacher is to secure correct deportment and good scholarship. He has, early in his experience to decide which is the more important, and which precedes the other. Correct deportment is not only the key to the great store-house of learning, but it is the directive force in its use. Knowledge, theoretical or practical, is valuable only as it is directed in channels for good.

We have intimated that the school is the aggregate of the family. It is easy to see that the study of school government is the study of human nature. Wide as is the range of thought in science, literature and art, it falls far short of the study and control of the motives and passions of children. Mr. Beecher has said that ministers need to know more of human nature than of theology. It may be as truly said of teachers, that *their* success is in direct ratio of their power to develop and direct motive. In school government the first thing to be secured is order: in itself a means to an end, it is also a result. It must and does come from restraint—compulsory or voluntary. Restraint is a check upon the tendency to do wrong. It is either a forcing back of evil desires from without, or a withholding them from within. One is the effort of the teacher: the other of the pupil. School government has ever recognized the fact that obedience, cheerful or forced, must precede systematized effort. Believing that some subjects would lend cheerful compliance to law, and that some would not, provisions have always been made for the unwilling. History furnishes no evidence of the complete control of evil passions in children, or adults, by either system alone, and, since human nature repeats itself, we do not believe it ever will. There has, however, been some change in the order of the use of these systems. Formerly it was thought best to *force* obedience until reason was able to influence judgment to right action. But now forced measures supplement the voluntary. Restraint, when voluntary.

curbs the appetites and passions, and makes them subserve the highest purpose of the Creator. When compulsory, they simply serve the behests of another. By contrasting the workings and results of these two systems, we may be able the better to judge of their merits.

A quarter of a century ago, comfort, and but little of that, was the only consideration in the preparation of places of learning, and whatever was unsightly had to be accepted. Now, ease and beauty are added, unsightly things put away, and the workings of the mind made willing and cheerful from its surroundings. Then, in spite of repeated punishments, the school furniture bore marks of an ill-spent childhood. Now yards, buildings and appurtenances—ornamental as well as useful—are voluntarily kept as inviolate as private property. Twenty-five years ago, the hour most dreaded by the citizens of our villages, was when the school would let the young “injuns” loose, to raise the war-whoop and place life and property at discount. Now, at the close of school duties, twenty thousand teachers in our State alone, raise their hands, and a quarter of a million of order-loving, property-respecting children pass down our streets, illustrations of a culture and training not gained by force. With this acknowledged gain in respect for public and private rights, we have to admit the fact that the use of the rod has been growing less. Is not the prophecy of one of the nation’s leading educators well-timed! “The system of corporal punishment generally employed is likely to go out of use altogether before the close of the century.” In the midst of the enthusiasm of the hour, educators and people, taking higher grounds for school government, the queries come, Are children no longer bad? What is to take the place of force? In answer it may be said, Children *are* bad; but not as bad as they were. True, evil desires and tendencies have the same source and produce the same effects as in the past. But mental science has revealed ways of influencing motive not before known or practiced. Attractive and repellant forces in the world of matter are better known than formerly. Why not admit progress in the use of these forces in the realm of mind? The kind and extent of forces used, and means applied, for right thinking and right acting, and the higher stand taken by society and the nation, in matter of morals, furnish some proof. The simple fact that private correspondence is

sacred, though publicly conducted, gives evidence of the confidence of the nation in the increase of the morality in its subjects. If such gain is admitted in the parents it must appear in the children. And what shall take the place of force? Public sentiment, through Boards of Education, points to a forfeiture of rights and privileges, or suspension. While the free use of the rod gave our schools the appearance of military rule, suspension makes them business-like. In our cities the teachers open and close their schools as the business man opens and closes his office. All intruders are thrust out. The good of the majority is uppermost. Can it be otherwise? What principal with five hundred or a thousand pupils can visit them? Or how can he administer proper punishment to one in ten of the referred cases of discipline without full examination as to the kind and degree of guilt? How can he exert that social power necessary to secure the co-operation of the parent? This is impossible. The more extended the system, the farther removed from its details. System is the need and outgrowth of aggregation. It has its origin, and reaches its perfection, in our cities: the more of it, however, the less of sympathy. While we can indorse the business-like plan for control in our large schools, we need not infer that their form can take the place of truer agencies in our smaller ones. As teachers, we ought not willingly to throw off the responsibility of correcting wrong; but rather exhaust our resources for the production of moral character in an unwilling pupil. Nor should we forget that suspension usually punishes a child for life—finally makes him an object of search for the police, and an inmate of the jail at last; that with the sanction of the board and parent, it is often more of a duty to use judiciously the rod than to suspend.

At an unwarranted extent, and aside from our real purpose, we have considered the two ways of control in school government—with a preference for voluntary measures over compulsory, making the former the rule and the latter the exception. The age calls upon the teacher to develop in the pupil a power to govern himself. What are the most efficient agencies to secure this power? The teacher's first work is upon the will of the pupil. How can an accumulation of wills, all differing in bent and strength, be made to conform to some standard of right? First, the teacher must secure the respect of

each pupil. To do this, he must give high-toned example; show scholarly fitness for place, and distribute prompt and impartial justice. Pupils respect, from the first acquaintance, that teacher whose example is worthy of imitation. No teacher can successfully bid his pupils forego the gratification of a desire which he himself indulges: nor can he change bad purposes to virtuous action, unless he both believe and practice the good only. He soon learns that the child's estimate of character is ever ready, correct, and often unchangeable: hence he will see that nothing is omitted in regard to kindly recognition, sincerity in look and gesture, self-control, gentleness in manner, neatness in person—for all these are seen and almost instantly measured by the quick eye of the pupil. While a good example goes far to beget respect in the pupil's mind, fitness for place soon sets at rest the question whose is the controlling will. Any random inquiries after former plans, undecided movements, a manner revealing doubt as to what to do first, evasion of honest queries, destroy confidence and make respect for the teacher impossible. The distribution of prompt and impartial justice to offenders is an important element in securing respect.

In civil government the laws are made, penalties attached, and the crime, when committed, is classed and punished. In school government the teacher represents the legislator, judge and executive. Having all power he can stay or hasten sentence, or make a penalty to suit the offense. It is his duty, in the exercise of so much power, to use it for the greatest good of offenders, and this he can best do by studying motive. The teacher too often sees only the doer and the deed, while the motive, if known, would vary the intensity of the reproof or punishment. It is a good indication of the pupils' respect for the teacher's judgment when they feel and say that the teacher does the "fair thing." Next to respect is love. While the former prepares the way for the latter, the two make parallel the wills of teacher and taught. No pupil loves the teacher he does not respect. No pupil willingly withholds a bad deed, unless it be from respect of self, or the respect and love for the feelings of another. To deny a passion shows a desire to serve something better. The teacher's sympathy for the whole child-life begets love in return. The milk of human kindness is in the cup of sympathy. Love touches the

mainspring of human action, and opportunity only is wanting for them to unfold in a multiplicity of good deeds. Industry is also an efficient agent in securing order. Though logically classed as third, it is practically first. The teacher that does not immediately set his pupils at work has to provide means for their correction. Mischief comes from idle hands. Industry is persistent effort in doing something. This implies a plan, or else the parts of the work, when finished, will have no reference to each other. Since the faces, tones, manners and habits of pupils mirror completely the same in the teacher, a working school must have a working teacher. Work proceeds from two incentives; one from love and one from pay. One of these always rules the actions. The architect, seeing the connection of all the parts of his ideal structure, knows no limits to time or effort to hasten its completion; but the laborer, that carries the bricks to an assigned place, sees only the burden he bears and the pay he is to receive, and gladly quits at the appointed hour. The teacher that loves his work is the architect of an imperishable structure—one that is to partake largely of his own character; hence dollars and cents do not measure his efforts, nor the exactions of the school law limit his time. Visions of immortal glory are ever present with him; they thrill him in his daily round; they come to possess his soul while living, and in the parting hour he is led to exclaim, in the language of Henry Martin, "Immortal glory, to have benefited the human mind." The teacher whose chief incentive to work is pay, finds a reproduction of his purposeless effort in careless pupils and isolated work. Industry in school is a power, and, of all agents to secure order, we believe it the most efficient. It turns the minds of pupils in like channels, and leads them to the next important element of order: popular sentiment in school. This is an outgrowth of the elements named, and cannot be created independent of them. It consists simply of like thoughts and feelings on the part of the majority of the pupils, favoring the views and work of the teacher. It is an index of the telegraphic communication of the heart of the teacher with the hearts of his pupils. Popular sentiment often helps him to bring offenders to justice, and forms an essential element in all successful school entertainments. It becomes the teacher's bank stock, on which he may draw, in cases of emergency, for support, and it becomes to

him a pleasant reward for previous effort. It is the experience of teachers that there are times when the flow of spirits to and from teacher and pupil is checked by some peculiar condition of mind, unknown to either party. At such times a thoughtful teacher will make no appeal for aid in any general enterprise; nor will he depend upon this agent when he has just reproved a large portion of his pupils for the commission of an improper deed. There are times, too, when soul speaks to soul, and the wants of the teacher need only be *mentioned* to be answered. The teacher alone is responsible for the success or failure to come from the manipulation of this valued agent in school government. Official and parental aid is a power for school discipline that the teacher must have to succeed. His first association with his board is simply *legal*; but after his work begins, it must be *sympathetic*. The best school government will be found where the teacher and his board are a unit upon matters of discipline. Whenever a member of a Board of Education speaks upon matters of school management, his words of praise or censure are always taken as official, whether so intended or not. Hence the teacher should be the first to testify of school trouble, lest the parent, in the heat of wounded pride or honor, made statements less impartial. The successful teacher keeps in close sympathy with his employers. To secure parental aid, where and when most needed, it is well to work upon exceptional cases. If the opportunity for social calls is limited, the teacher should visit, first of all, the parents of such children as are not making the most of their opportunities. For such pains the teacher will often receive true sympathy and hearty co-operation where least expected.

It will be seen, in conclusion, that the willing check upon the evil tendencies of our natures begets the like in others; that it becomes a power that grows with time and opportunity. It is really soul-work, and the heart of the desponding teacher is cheered with the thought that our Heavenly Father has given him such motives to touch, and such agencies to use. In answer to the question, What are the most efficient agencies in school government? we answer: Respect, love, industry, popular sentiment of the pupils, and official and parental aid. The teacher that can secure these agents may reasonably expect some degree of success in school government. He will be the possessor of a power unknown to the wielder of birch and rule. Or-

der, resulting from restraint secured by such agencies, will give the pupil freedom from suspicion; freedom from petty exactions, and freedom in that highest and most liberal sense of thought, word and deed.

School government, as herein considered, is still aimless. Order is only a means to an end. School, with its mental training and culture, is yet to fellow.

There yet remains a rounding out of a full, symmetrical character, which can only come by contact with men and things. The school is to prepare the pupil for this contact. The school's best gift to the nation is a cultivated citizen; one that has within his own breast the essential elements of government, whose mind is stored with useful knowledge, and trained to skill in its use; and whose whole life is directed by a heart force that seeks the good of man and the glory of God. If it is ours to influence a single child-life to grow to such a consummation of hope and effort, there can be, for us, no burden too heavy, no sacrifice too great, if we but remember that the Great Teacher will reward us, not according to the act or deed, but the motive and effort.

M. L. SEYMOUR.

HYMN.

RHODE ISLAND NORMAL SCHOOL.

Father of mercies, hear our prayer,
Bless this our parting hour:
O, guide us by Thy holy love,
Protect us by Thy power.

We leave these mem'ry-hallowed walls,
Where precious truths we've sought;
With hope and love—with faith in Thee,
Be future action fraught.

O give us strength to labor on
Through storms, or noon-day heat;
And Thou our even-tide of life
Wilt cheer with blessings sweet.

Calmly we'll wait the Master's call
To yonder world of light;
May teachers, scholars, with one voice,
In choral praise unite!

ONLY A PRIMARY SCHOOL.

"Only a primary teacher," "Anybody can teach a primary school," are the contemptuous remarks we sometimes hear. Even those in authority will put their inexperienced or low-priced in a primary department as though it were a matter of insignificance.

"As the twig is bent the tree's inclined," and as the home training follows the little six-year-old into the school-room, so does the primary school exercise an influence over the future habits, education, and character of the child. Every teacher in the advanced grades knows something of the weary work of unteaching; of righting the wrongs of primary education; of overcoming inattentive, idle and unsystematic habits. Has the primary teacher nothing to do, no need of much learning? The little children come to us in good faith, believing us to be perfect, wanting nothing. Little children like order and method, they are not the dullards we sometimes suppose them to be. Do they not frequently give answers and ask questions which startle us into deeper thought? Even the "New Studies" are not so beyond their comprehension that they need be kept a secret from them.

In the primary school, reading is the special study. And did you ever notice how the little ones do study? Verily, there are some in my room who will apply themselves diligently for *three whole minutes*; all the teacher has to do is to see that they do not injure themselves by such application.

The blackboard, slate and pencil must play an important part in the exercises of the primary school. It is folly to tell a little child to study; what has he to study about? Give him something to *do*; excite his pride in doing it *well*; keep him *busy* by all means, and the secret of government is solved.

Every child of fair ability ought to be able to read simple pieces with distinctness, ease and expression. In the beginning, and all through the course, attention should be paid to distinct articulation; and I know of no better means of securing this than a short exercise at the beginning or close of each recitation in phonic analysis, and a vocal exercise once a day by the whole school. If the word "cat" is taught, have it uttered distinctly and naturally, and so of every other word. I

would always begin with *words* and *not* letters; words mean something to the child, letters do not. By a little management, after a comparative small number of words have been learned, the child will unconsciously have learned the letters, and that without any direct attempt on his or the teacher's part. When a sufficient number of words have been learned to begin to form sentences, if the children read in drawling, unnatural tones, have them read in concert and alone until the reading is natural. That the child will make mistakes we must expect, and we have much need of *patience* and *perseverance*, and of that charity which "hopeth all things, endureth all things." "*Seeing* and *talking* and *writing* and *reading* MUST go together." I would have the whole of every lesson in the First Reader printed or written by each pupil, observing capitals and stop-marks. A valuable exercise in the first half of the First Reader is to make a hunting ground of the printed or written lesson on the blackboard on which to exercise the children's skill in finding words called for; giving a pointer to two or more and checking the words as they are found, until the whole lesson is checked. All new words of each sentence, have the children incorporate in sentences of their own.

To give a little girl's definition, "Reading is talking from a book." This ability to talk from a book can hardly be acquired if we depend altogether upon the text-book for a reading exercise.

I have found it profitable to subscribe for children's magazines, and have as a daily exercise from the Second Reader pupils, two in the class read a short selection after the lesson is finished. I make it optional and allow the children to make their own selections; and I know of but one pupil who is not anxious for his turn to come. By this means they have something new to read, something with which they are not familiar. It also begets a taste for reading and gives self-confidence. In the higher grades there is no danger of a lesson being too much practiced, but in the primary school the child is learning words, and if the lesson is too often reviewed he will read from memory and perhaps not see a word he is repeating.

To secure fluency, I would have the lesson read backwards repeating each word, pupils read as far as able without making a mistake: read word by word; the teacher first pronounces a word, the children the next, and so on, any new or difficult words selected and put upon the board.

To secure intelligence, read sentence by sentence, obtain the meaning of difficult words, draw the substance of the lesson from the class and put an abstract upon the board.. Of course we can not do all these things at any one lesson. It is well to change our manner of teaching, we can better secure the interest of the class. Above all let the lessons be *short*. A ten or fifteen minutes recitation in a primary class is better than twenty-five or thirty. Every lesson should begin with such promptness and life that the children will not consider it an unpleasant task. What if the class will get a little disorderly ; better have a noisy school than a dead one. Let us ever bear in mind that we are teaching other lessons, than those of reading, and writing, and spelling, and arithmetic. Our influence is more than we are conscious of. It is our whole character which is teaching.

“Thou must be true thyself,
If thou the truth would'st teach ;
Thy soul must overflow,
If thou another's soul would'st reach.”

THE EFFICIENT AGENCIES IN SCHOOL GOVERNMENT.

Public schools are established and supported by tax for the purpose of securing to the young that knowledge, and skill in the use of it, which will enable them to realize the most of life, and to discharge properly the duties of citizenship. Teachers are employed to instruct and to govern ; but government is to be the *means* of securing to the school a condition of things favorable to efficient and profitable study. The means of government should reach out and grasp and control *all* elements upon which efficient instruction and study depend. Pupils are not the only objects to be governed. The parent should be reached and controlled as well. Our rules and regulations are all about the duties of teachers and the duties of pupils, but never a line about the duties of parents. Our jurisdiction does not seem to extend beyond the precincts of the school building. For violations of the rules, we require pupils to do something,—as to bring an excuse for absence or for tardiness,—and in case of neglect or of refusal on the part of the parent, *we punish the child*. We have created a fashion,

sanctioned by the school law, of shutting out the child from school for disobedience, thus defeating the very object of our free school system. There is now a case in the Circuit Court of Winnebago county which illustrates the injustice of expulsion for disobedience. In this case, the parent refused to *allow* his child to observe a regulation found in the rules of nearly every graded school in this State. Three trials have been had, and the school officers have been sustained. The child has been out of school *over two years*. And all this in the name of school government. We have rules, sanctioned by the courts, for requiring regular and punctual attendance at school. These rules are reasonable and just, for no child can successfully pursue a study who is even occasionally absent. But in the application of these rules, we do injustice to the pupil. We remove him from the fountain of knowledge; we make him a pariah— an outcast—rejected and condemned by society. An appeal to the parent is often met by his selfishness; he looks more to his own interests than to the intelligence of his child. Most teachers have not the time to write notes to parents, to visit them and *beg* their co-operation. In all cases where the parent interferes with his child's right to an education, the only *efficient* and *just* agency of government is *law*. The parent should be made responsible for the child's appearance at school, and *punished* for keeping him out, or for making him tardy, or for inciting him to acts for insubordination.

In the school room there must be order. The success of a school depends upon it. Children have all the faults that belong to the immature period of life. They are careless, thoughtless, easily misled, and form unreasonable hatreds. They are selfish and willful, and sometimes rebellious. They don't like sermonizing or moralizing. But with all their faults, they have a sense of justice and of right. I have never yet seen the child who could not distinguish right from wrong, when properly presented. I have failed to notice the *total* depravity of the human heart. I have great faith in human goodness, and in appeals to the child's consciousness of right. I believe that most children can easily learn the lesson of *willing* obedience to lawful authority. The government of a school rests on *respect*, and respect depends upon the mental and moral qualifications of the teacher. Once gain the respect and love of the child, and obedience follows a simple request. But the sense of right and of wrong may be feeble in some. We may

never gain their friendship or love. Moral suasion does not seem to bring about the desired result. *Men* do wrong knowingly,—and so do *children*. Passion is stronger than judgment. For such, *punishment* is the only remedy. Not a punishment that *deforms* the child; that removes him from the school-room; but a punishment that *reforms* him; that makes a bad boy a good one. To give instruction in book-knowledge, and to discipline the intellectual faculties is not the sole duty of the teacher; he is to make the girl a woman, and the boy a man; he is to hand back to the parent a being *better* as well as *wiser*; he is to educate the *heart* as well as the *head*. The teacher should be a factitive power, changing the objects of his action into forms of beauty.

Willful disobedience should be punished. Punishment is anything that *pains*, either the body or the feelings. I question the propriety of *corporal* punishment, except in *very rare cases*. I would not wholly discard it from the proper agencies of government, but I should want to feel sure that it would be the *best* thing for the specific case. As a general rule, the child should be guided and restrained, not by the whip or the gad, as is the brute ox, but by employing means suited to his intellectual and moral nature. Authority established and maintained by the barbarism of Delaware is foreign to the civilization of Illinois. In every human breast is something that feels that right is right, and wrong is wrong. I would pain *that* something as a punishment. I would call *reproof* a suitable and efficient punishment. It pains. It arouses feeble consciousness. It quickens perception. It is reformatory in its nature. It implies calmness on the part of the teacher. It should be given in private, when the child's pride will not be aroused by the presence of his schoolmates. A *rebuke* is not so efficient, because public. I would call the *loss of a privilege* a punishment. For misconduct, the child may be deprived of a choice seat, or of his recess, or may be deprived of the society of his seatmate. He is thus led to see that good conduct is followed by a retention of his privileges, and that wrong conduct reflects upon himself. *Humiliation* is of doubtful propriety. To lower one in the estimation of others does more than pain,—it *stings*, and often arouses a feeling of revenge. If it should so happen that *all* means fail; if reformation appear hopeless, and the good of the school and of the child require it, he should be sent to the reform school, where special agencies restrain, and

where the privilege of obtaining knowledge still exists. We have schools for the deaf and the blind; we have asylums for the feeble-minded and the insane, we have a reform school, but none but *criminals* go there. Why not send to this school the incorrigibly bad child, the one we expel from our schools. Is he not worth saving? Shall we make him a scape goat? Our laws are said to be based upon christian principles. Religion is said to be good for its *saving* properties. A religion that seeks to save the soul *after* death, and not to save it in this world is an unchristian one. Perhaps the child will not be worth saving when he comes to die. Expulsion from school, with no provision for a subsequent reformation is a deadly sin. Every household in this State is a reform school, as should be every public school.

Good order can usually be secured by directing the child's activities into proper channels. Give him something to do; assign definite lessons; give him variety; lead him to the ledge, and leave him to devise the way of getting up or down; keep ever in a state of expectancy. Do all these things, and the child will have no time for mischief, nor the teacher any time to govern. Order and discipline will exist without the teacher's knowing it,—which is all the better for him.

H. RULISON.

The disciplinary value of Latin is shown by the testimony of many men whose sole interest lies with purely technical education. President Runkle of the Massachusetts Institute of Technology once said that he should be glad if Latin could be made a requisite for admission to that institution. President Thompson of the Worcester Industrial School said substantially the same thing to me yesterday. Both these gentlemen bear emphatic testimony to the fact that boys who come to them after having had some training in Latin are greatly superior to those whose previous training has been wholly in English studies. Let us hope that the day is far distant when Latin shall be banished from the high-school. Better would it be if it could be made a required study in a certain portion of every high-school course.

M. G. DANIELL.

EDITORS' DEPARTMENT.

The article on Mud Pies at the opening of this issue, presents to our teachers of country schools some lessons of practical value. The adaptation of whatever instruments lie at hand to use in school work is of importance to every one. Especially those who are teaching in lonely districts, isolated from daily conversation with teachers, can profit by the example of the heroine of mud pies.

The paper on the aids to discipline, written by Mr. M. L. Seymour, is commended to every school teacher in the land. This was prepared for the meeting of the Illinois Society of School Principals. Those who heard the author read it, pronounced it good; it reads even stronger when it is reviewed. All the principles of school government are portrayed in a terse and complete style. We regard it as one of the most exhaustive papers on that subject, that we have seen in print.

The same subject treated by Mr. Henry Rulison, of Durand, who followed Mr. Seymour, deserves careful reading. We are glad to be able to give it to our readers.

The fifth annual meeting of the Illinois Society of School Principals has taken place, and as has been the custom since the organization of the society, the SCHOOLMASTER gives the official proceedings in these pages. The entire official history will be found in back volumes. More real schoolmasters were in attendance than ever before. Several good and true men from Iowa, were among the debaters; among whom were Messrs. Crosby of Davenport, and Robinson of Marshalltown.

The programme was completed as announced, and it is not saying too much of the papers to pronounce them better than any similar number ever presented to the Illinois teachers at one meeting. The address of the president, Mr. H. L. Boltwood, of Princeton, was running over with practical suggestions. We shall publish it in September. The report of the committee on the address we give in the present issue.

The lecture of Dr. Samuel Willard, of Chicago high school, on History, held every man every minute. Twenty years ago we remember how we marvelled at the fullness of the Dr. Few men in the country can stand and talk so easily, so pointedly and so beautifully.

The SCHOOLMASTER will present papers from the Dr. during the autumn.

Natural science in the public school, which requires so much attention from Illinois teachers, was presented by Messrs. Hall, and Forbes. Not the radical views of the scientist, but the moderate, well considered views of the practical schoolmaster were given by these gentlemen. This is the first appearance of Mr. Hall at the State meetings for several years. It is hoped that he will not leave them again.

Mr. Forbes' paper will appear in this magazine.

The subject of Latin in the public school, lead by Mr. Dougherty, developed an interest and debate that astonished the friends of the question. Classical instruction is surely gaining favor. This we regard as a good omen. More boys for college, fewer pupils turned into the world in early school life or at the close of the high-school course, is an end much desired.

The paper on Duties of Teachers, outside of the school, received the general approval of the audience. The debate turned largely on the propriety of giving attention to Sunday-school work. Some of the principals doubted the wisdom of the schoolmaster superintending or teaching on Sunday, but all believed in being identified with a Sunday school, either as pupil or teacher. We believe the whole argument hinges on this; what shall one do to be a man? We understand that manhood implies the doing good, whenever and wherever circumstances will permit. Men ought to work in Sabbath school, but the law is evidently not of universal application.

Mr. Andrews of Macomb, who is one of the solid schoolmasters, gave the society the plain common sense view of what a graded school ought to be. The follies and dangers of the cast-iron gradation, and the misfortunes that befall our schools from being in new and incompetent hands were set forth. Mr. Blodget seconded the remarks.

Taken altogether, the Ottawa meeting exceeded in ability, any that has heretofore been held.

One of the most encouraging signs of the day is the re-engagement of teachers. We have never before known of so few changes in the principals of our city schools. An injustice has long been evident, especially in the west, in the condition of things that enabled teachers of little experience, but of excellent personal appearance and education, to obtain a situation which demanded not only all the qualifications possessed by them, but the additional ability that can be acquired only by experience. Boards of education are understanding that the man or woman who has served them for one year even passably well, is worth more to them the second year, and that the risk incurred by a change is not counter-balanced by the other one of experimenting

with an untried hand. Teachers need never expect to occupy the proper position in society until they are able to be citizens, allied with other citizens in all that concerns the permanent good of the town.

New England, Chicago, St. Louis, and our best school towns, appreciate this as is shown by the employment year after year for a decade, the same men and women in the same positions, and always with compensation graded somewhat upon the term of service. The day will come in Illinois when the schoolboys of the schoolmaster will be the school directors of the same master. Then will the situation be comprehended and teachers cease looking, as the school year draws to a close, for other places and new neighborhoods.

Our eastern contemporaries are discussing the institute question with earnestness. The problem is, how shall they be conducted. Some advocate home talent, while others are in favor of importing foreign instructors. We understand that valuable aid can be received from a combination of home and foreign talent that can be procured in no other way. It is not that home talent is inferior—it is generally the best—but that new ideas are brought from one's neighbors, and a comparison of systems, county by county and state by state, is a powerful means of improvement. Illinois institutes are very numerous this summer, and our observation is that our institute work is of a superior character.

The plan oftener adopted, is to give the institute the character of a class, and to do drill work. Several instructors are employed to conduct classes, while the county superintendent gives direction to the work. Counties are exchanging teachers and superintendents. Wells of Ogle, goes to help Williams of La Salle. Institute work is perhaps the most important of the time; the character and method of their conduct demands careful consideration.

In many counties in our State, the names of women are announced as candidates for the office of county school superintendent. This is the result of the law passed by the legislature last winter, permitting women to hold any school office in the State. There can be no doubt of the propriety of this law. It has been tried, and proved beneficial. Women in Kansas, vote for all school offices. Wherever a women candidate can be found, willing and able to do the visiting and the financial work of the office of county superintendent as well as, or better than any man candidate, she should be elected to the position. This will be done, especially in our small counties.

The SCHOOLMASTER, however, is an advocate for the abolishment of this office. Crippled as it now is, made so by the legislature of 1872, it will retard the progress of the free-school system in our State. The few bright spots in Ogle, Macon, McLean, St. Clair and a dozen others, where the present able superintendents are candidates for a re-election, only serve to make the other counties more dark by contrast. County Boards in a few cases, are determined to employ a superintendent for the schools, knowing full well that an efficient overseer is absolutely necessary to the greatest success. But a majority of the boards of supervisors, will direct the school officer to *do as little as possible*.

It is as members of local boards that women can be most efficient. The Connecticut Report says:

In Connecticut, Massachusetts and several other States, women are beginning to serve as School Visitors. So far the experiment seems to work well. In some towns it is not easy to find professional men, whether clergymen, lawyers or physicians, who will spare the time required for the thorough supervision of schools. In such towns there are usually well educated women, experienced as teachers, in practical sympathy with the work of the school-room, and with leisure and heart for the duties of the office. The great majority of our teachers are females. During the last *summer* the number of male teachers was only 198, while the females numbered 2,240, being more than eleven times the number of males. The very structure of woman's mind fits her for teaching, especially in elementary schools. Woman is the natural guardian of the young. Outside of the family, she nowhere seems so truly to occupy her appropriate sphere. While woman so generally excels in instruction, are there not cases where her attainments and powers may be wisely employed in the supervision of schools?

Before the next SCHOOLMASTER visits its subscribers the new school year will have begun in earnest. Teachers will be found in the school-room with the work for the year fairly begun. It is during the latter part of vacation that working plans are made, and bright prospects are before the teacher. New ideas are gained and old ones strengthened; plans are matured, and even details of class-work are completed while in conversation with other members of the guild. Reader, what are you intending to do next year? That class of twelve-year-olds that were so bright and enthusiastic will meet you again in early September. Are you ready for them? In the four new branches, are you prepared for elementary work? The progress in these sciences is a source of congratulation to movers and supporters of the law that authorized the study in our common schools.

Zoology is no longer a loud sounding, scientific, strange name, but that which tells us something of the living world about us. All feared at the outset—do yet fear the damage from superficial study; but some of us have learned that never so little intelligence in any one department of Natural History can be made of use in any school in Illinois. The leading article in this number, on Mud Pies, furnishes ample illustration.

We know of nothing more available, and less likely to do harm by superficiality, than the study of insects. It can be used in any grade of town schools as well as in the country districts. In the latter, particularly the material is convenient, the study interesting, and to add to this, the matter has a practical bearing that the advocates for the "practical," even Professor Turner himself would approve.

When we remember that for every plant in the country there are at least four species of insects—that many of these subsist upon vegetation—that there are one hundred thousand of the beetle order alone; when we consider that by the ignorance of man, some of the most beneficial of these are being exterminated, while those that are injurious to vegetation are multiplying, then it becomes evident that in agricultural Illinois, extraordinary advantages may come from a knowledge of the insect world.

The veriest child in our schools can be taught to analyse the common

Lepidoptera and Coleoptera, tell their habits and uses. The discipline acquired in this analysis is ample reward to the teacher; the practical results will quiet availing from the parent. The instruments needed are within reach of all, and will cost less than one dollar—what teacher cannot afford this? The *SCHOOLMASTER* for September, 1872, contains Mr. Westcott's article on this subject, and furnishes all the information necessary for the intelligent prosecution of the study. Fields and forests are literally full of specimens. It is true the works on the subject are limited, but they are already sufficient in number to give the tyro several years' work. Mr. Westcott has already published his willingness to name any insects that are sent to him for that purpose, if a duplicate is sent for his own use.

Why not make the Fall terms of our schools fruitful in this branch of Zoology?

PROBLEM.—“Given $84\frac{1}{2}$ square feet of 3 inch plank. Required the length of one side of a cubical box which can just be made from this plank, allowing no waste in sawing.” I should like both an arithmetical, and algebraic solution.

UNIONTOWN, KAN.

W. J. B.

EDUCATIONAL INTELLIGENCE.

OFFICE OF SUPERINTENDENT PUBLIC SCHOOLS, }
ST. LOUIS, March 20, 1873. }

Hon. H. W. Snow, House of Representatives, Springfield, Chairman Committee on Education :

SIR: I hope you will pardon me, a stranger, for addressing you these lines. My excuse is, that a proposition is reported as before your Assembly to repeal that provision of your school law, passed last year, which relates to the study of the Natural Sciences in the District Schools. Although resident in another State, I have studied your school system with no small degree of admiration, and the provision in question is one that I think very wise and practical. Should it be carried into effect for two years, I do not apprehend any danger of its repeal. It would, I think, be regarded on all hands a perfect success.

Perhaps my opinion may have more weight, when I state that I was formerly much opposed to any experiment of the kind, fearing that it would divide and distract the attention of the pupil from those cardinal branches which form the staple of the course of study in our common schools. An experience of more than a year with a system of this kind in this city, has convinced me that there need be no such danger, but that these lessons in Natural Science, if entirely oral, and not oftener introduced than three times per week, will improve the character of the instruction in all the regular branches of the course of study, as well as arouse a general interest on the part of the pupil to original investigation.

I am very much opposed to any movement that should look toward supplanting any of the branches that we now have in our common schools throughout the country. The paramount importance of reading, writing, arithmetic, geography, grammar and history, in unfolding the mind of the pupil, and in giving him the tools with which to put himself into practical and theoretical relation with the world around him and with his fellow-men, is to me beyond all question. It is only as a very valuable auxiliary to the other branches of the course that I would recommend lessons in Natural Science.

We have found in the course of our experiment much more than we looked for. The results have been so remarkable that, with your permission, I will briefly name them.

1°. The teachers as a body have been under the necessity of making special preparation for these lessons, and have, in this way, become interested in a range of subjects that are now occupying the exclusive attention of the scientific intellect of the civilized world. (In this field fresh discoveries are continually made, and these in turn become the bases of inventions which make possible our [in America] great strides in productive industry.) The consequences are, that our teachers are getting possession of a vast fund of illustration to use in the regular daily lessons on the other branches, and these daily lessons improve in interest and scope.

2°. The pupils manifest great eagerness to understand the scientific explanation of the phenomena about them, and they carry with them into other studies a spirit of investigation and inquiry which aids them very much in digesting what was before only swallowed, or, at best, masticated. I am, sir, with the greatest respect,

Your obedient servant,

WM. T. HARRIS.

The *Ottawa Free Trader*, in noticing the late meeting of the Illinois Society of School Principals in that city, thus describes the party: "They were a fine looking body of men, much more intellectual than the average of conventions. They did not look as melancholy as a meeting of preachers, nor as wildly in earnest as so many politicians. They were well dressed, youngish old men, or oldish young men, the young rather predominating. They were fearfully precise men in language and deportment. They speak with an agonizing distinctness, making every consonant ring with a pronounced jingle of its own. They speak with careful deliberation, their hesitation arising not from a rush of ideas, but a delicate scrutiny of words, and their grammatical relationship with each other. Perhaps not a sentence was uttered by any of them, even in the heat of debate, that would not have successfully passed through a grammatical criticism; that is, so far as to have created a wrangle among the professors as to how it should be parsed; because it is a law as fixed as that of the Medes and Persians, that no two professors of grammar may, can, must or will exactly agree on any question of grammar, and are ready to debate endlessly on as trivial subjects as that which caused certain people to question

"Whether the snake that made the track
Was going south or coming back."

ILLINOIS.—*Industrial University*.—The catalogue and circular of this institution for 1872-73 is out. When the catalogue for 1871-72 made its appearance, we were disposed to take exceptions to the mechanical execution and taste of its make up, but held our peace, thinking the mistake would hardly be repeated. The pamphlet before us is no credit to any printer. Nearly half of the second cover page is taken up with "Errata." Many names of the officers as well as of students are incorrectly spelled. The persons who are responsible for this awkwardness are unknown to us, but it is a pity to put forth the claims and resources of such a great and well-officered institution, in such cover and in such a garb. The total number of students for the year is recorded as 402; 328 men, 74 women. The courses of study, colleges, faculties, schools, departments, etc., etc., are carefully explained in the circular, and resources for instruction are portrayed that astonish the reader with the power. The wonder is, that instead of hundreds the students are not numbered by thousands. Of our own knowledge we are assured that some of the branches of instruction at Champaign are

taught by instructors that have no superiors in the United States. Especially is this true of the Prof. of Chemistry.

Jefferson County.—An institute will be held in this county, at Mount Vernon, the 1st week in September, to continue one week, or longer if the teachers desire.

Brown County.—An institute will be held in this county at Mount Sterling, commencing Aug. 18th, and continuing six days. Instructors are of home material, assisted by the county superintendent

Mason County.—We are reliably informed that Mr. G. W. Dominic has been engaged by the directors, as superintendent of the next term of the schools of this place. We are glad of this, for he has filled that position very satisfactorily for the two last terms, and no time will be wasted in scholars and teachers adapting themselves to the new order of things which invariably follows a change of Superintendent, from the fact that no two persons are alike in their manner of conducting schools, nor in anything else.—*Independent.*

La Salle County.—A county teachers' institute will be held at Ottawa, commencing on Monday, July 28th, and continuing for two weeks. Dr. Sewall, of Normal, and E. L. Wells, Esq., superintendent of Ogle County, will assist in conducting the exercises. Dr. Sewall will give a few popular lectures during the time.

La Salle County.—Mendota.—At a regular meeting of directors, J. R. McGregor, was unanimously re-elected principal of the east side schools for the ensuing year, with the following assistants. Miss L. L. Howes, Mr. Wm. Beardsley, Miss Lizzie Stevens, Miss M. A. Vincent, Miss Myra J. Howes and Mrs. A. M. Wilson. All these are of last years corps except Miss Howes, and Mrs. Wilson.

Clay County.—The superintendent of this county, Mr. C. H. Murray, last summer held a six week's teachers' institute in his county, beginning on the 22d day of July. It was attended by twenty-five or thirty teachers during the entire session. On presenting his bill to the county board for this service, they refused to pay the bill, accompanying the refusal with some abuse and indignity. The superintendent sued the county for the full amount, but the case was not brought for trial until April last. The first result was a failure of the jury to agree. A change of venue was then taken to Richland County, where the case was again tried in May. The jury after being out for half an hour returned with a verdict for the full amount. The board of supervisors at their June term consulted their counsel about an appeal to the Supreme Court. The counsel replied that they could not promise any success, and *refused to take the case up to that court on a contingent fee.* The board however voted to have the case appealed.

Rockford.—Miss Mary Ashmun, resumes her position as first assistant in the West Rockford high school, after a year's absence, caused by sickness of her father, whose death occurred in June last.

A class of eleven young women, and five young men, graduated Thursday June 26, from the West Rockford high school.

The graduating exercises of the East Rockford high school were deferred for rain one day, and ten young women and two young men graduated there Saturday June 28th

Knox County.—The twenty-eighth commencement of Knox college occurred on the 26th of June, at the Opera House in Galesburg.

E. Q. Adams, S. P. Dunlap, W. J. Shoup, and F. I. Pillsbury, delivered orations and received degrees.

Rev. L. T. Chamberlain of Chicago delivered an oration.

This college has added a Normal course to its instruction, with the view of preparing students to teach. Mr. Geo. Churchill has charge of the Normal department, assisted by Miss Mary Allen West.

Freeport.—We have received a set of blank forms used in the schools of Freeport. They are carefully and elaborately prepared, and are intended to furnish at sight, any and all information that can be desired at the superintendent's office.

It is evidence of system and order that these are in use; although no two superintendents are likely to desire the same forms, all will be benefited if before they prepare their own, they send to Mr. Snyder for a copy of those in use at Freeport.

Logan County.—Lincoln University has 48 graduates.

The annual meeting of the Board of Trustees was held a few days since. Rev. John Guthrie, of Scotland, and Prof. A. J. McGlumphy, of Lincoln, were candidates for the position of President. The latter was elected, and the salary attached to the position was raised from \$1,400 to \$1,500. B. F. McCord, of Indiana, was elected Professor of Mathematics, and his salary fixed at \$1,000. Prof. Harris was retained, and his salary was increased from \$900 to \$1,200. Professor Taylor was elected for another year, and his salary advanced from \$700 to \$1,000. Prof. Richards' salary was increased from \$1,300 to \$1,400. Mr. R. M. Beard was made Treasurer, with a salary of \$1,400, out of which he is to pay his traveling expenses. He executed a bond for \$50,000 on entering upon the performance of his duties. The endowment fund of this flourishing institution, now amounts to about \$76,000.

Official Report of the Proceedings of the Illinois Society of School Principals.—

The fifth annual meeting of the Illinois Society of School Principals met in the Opera House, and was called to order at 2 o'clock, p. m., by Mr. H. L. Boltwood, president. Prayer was offered by the Rev. Mr. Cleghorn, of Ottawa. On motion of Mr. Coy, the reading of the president's address was postponed till some future time during the session.

Mr. S. H. White, read a paper on "Departmental Instruction." The paper was discussed by Mr. P. R. Walker, E. L. Wells, John Hull, Aaron Gove, A. J. Sawyer, W. E. Crosby, J. Piper, W. B. Powell, J. Mahony, Dr. Willard and others. An exercise, "How to Teach History," was presented by Dr. Willard. The Drs. method was discussed by E. P. Frost, G. W. Mason, E. W. Coy, M. L. Seymour and C. I. Parker.

It was moved and carried that the president's address be read this evening.

It was moved that Mr. J. Mahony be appointed treasurer *pro tem*. Carried.

The society adjourned at 6 p. m.

The evening session was called to order at 8 o'clock, p. m., by the president.

Mr. Cullen, president of the Board of Education of Ottawa, delivered an address welcoming the association to Ottawa, to which the president made a brief response.

The president then delivered his address.

Moved that a committee of three be appointed by the chair, to report on the president's address. Carried.

The chair appointed Dr. Willard, Mr. Coy and Mr. White.

Mr. Mahony, not being a member of the association, declined to serve as treasurer; on motion of Mr. Gove, the secretary was elected treasurer *pro tem*.

Moved and carried that the president appoint an auditing committee.

Moved that a committee be appointed on teachers and teachers' places. Carried.

Moved that a committee of five be appointed on nominations. Carried.

Moved that all school principals present from other states, be elected honorary members. Carried. Adjourned.

WEDNESDAY MORNING, July 9th, 1873.

The association was called to order at 9:30 by the president.

The chair announced the following committees:—

Auditing.—E. L. Wells, G. W. Mason and P. B. Hulse.

Teachers and Teachers' places.—Wm. Jenkins, A. Etheridge and E. Brown.

Nominations.—Aaron Gove, H. Rulison, E. P. Frost, A. J. Sawyer and J. S. McClung.

Mr. F. H. Hall, read a paper,—Natural Science in the Public Schools. The subject was discussed by S. A. Forbes, M. Andrews, J. Mahony, G. W. Mason, A. J. Sawyer, J. B. Roberts, Aaron Gove, R. Williams, W. E. Crosby and S. H. White. Adjourned.

2 o'clock, p. m., called to order by the president.

A Paper,—“The most Efficient Agencies in School Government,” was read by Mr. M. L. Seymour, and was discussed by A. J. Sawyer, H. Rulison, J. Piper, E. W. Coy, Dr. Willard, W. Jenkins and others.

A Paper,—“Why should Latin be studied by American Youth?” was read by Mr. N. C. Dougherty. The subject was discussed by R. Williams, O. S. Westcott, H. L. Boltwood, E. W. Coy, Dr. Willard and others.

Dr. Willard, chairman of the committee to report on the president's address, read the report of the committee, which was ordered placed on the minutes.

Moved and carried that the following committee be appointed on resolutions: J. B. Roberts, G. B. Charles and J. W. Gibson.

Moved that we meet promptly at 9 o'clock to-morrow morning. Adjourned.

THURSDAY, July 10th, 1873.

The association was called to order at 9 o'clock, a. m., by the president.

A Paper,—Duties of Teachers outside of the School, prepared by E. C. Hewett, was read by Mr. Aaron Gove. The subject was discussed by J. S. McClung, John Hull, J. W. Smith, Aaron Gove, Wm. Jenkins, J. H. Blodget, E. W. Coy, M. Andrews, E. L. Wells, C. I. Parker, P. R. Walker, G. W. Mason and others.

Moved and carried that we close the discussion on this subject.

Then Mr. Gove, chairman of committee on nominations, made the following report:

For President.—M. Andrews, Macomb.

Ex. Com. { P. R. Walker, Rochelle.
S. B. Bathurst, Leland.
M. L. Seymour, Blue Island.

Secretary.—W. Brady, Marseilles.

Treasurer.—J. W. Gibson, Belvidere.

The secretary was instructed to cast the ballot.

The committee on resolutions presented the following resolution, which was adopted :

The Illinois Society of School Principals, hereby express thanks to Lewis Howard, Esq., proprietor of the Clifton House, for generous fare and other substantial courtesies extended to its members; to Wm. Jenkins, Supt. of the Ottawa schools; to the board of education, and other citizens of Ottawa, whose liberality has provided the Opera House free of expense to the society for its sessions.

J. B. ROBERTS,

G. B. CHARLES,

J. W. GIBSON.

Moved that the place of locating the next meeting of the society, be referred to the Ex. Com. Carried.

Mr. Roberts, extended an invitation to the society, to meet next year at Galesburg, Mr. Parker, to meet at Joliet, and Mr. Sawyer, to meet at Mendota.

The treasurer made the following report, which was received.

Received of B. R. Cutter, \$ 18 50

“ “ Members, 37 00

Total, \$ 55 50

Paid per order of auditing com.,

\$ 17 00

Amount on hand, \$ 38 50.

The next subject on the programme, “ Defects in our Graded Schools, and How to Remedy Them,” was presented by Mr. M. Andrews, and discussed by J. H. Blodget, E. W. Coy.

Moved that the president *elect*, take the chair during the remainder of the session. Carried.

Mr. Westcott, read a letter from Mr. Peabody, on the “ Circulation of Sap.”

Mr. Crosby, extended an invitation to the society to meet with the Iowa State Teachers' Association, at Iowa City, Aug. 26th, 1873.

The society adjourned.

WM. BRADY,

Sec'y.

Report of the Committee on the President's Address.—Your committee on the address of the president, find it filled with valuable suggestions, all of which are worthy of consideration; but of them, they select the following topics as deserving special mention. It seems to us that they should be borne in mind for further elaboration and discussion in future exercises of this association.

I. Qualifications of principals, and supply of trained teachers. The first of these points is one of direct personal interest to us, since it effects the quality and constituency of our own body. It is incumbent upon us to raise the standard of qualification steadily, but not to mistake scholastic acquirements for practical skill. The maxim of Napoleon, “ The tools to him that can handle them,” is the true standard. Skill in government and in management of organizations is more necessary to a good principal, than knowledge of books; and a wise appropriation of personal experience marks the good principal.

As the standard of qualifications of principals is raising, so from the same causes rises that of assistant teachers; and we should regard with favor, all movements, efforts and plans of the normal university, of local normal schools and of high schools, to fit their pupils for practical work. Though the best teachers are self-made, or better, God-made, they are the better for help in the making, so far as schools conduce to it. Here again practical ability should meet its due reward. As to the over-preponderance of female teachers, it is not easy to define the ill-consequences of such occurrence, nor to do anything about them, further than to point them out in the few cases that arise: it is quite possible that an error in that direction may follow the former exclusive appointment of male teachers, but at present it hardly calls for notice, other than mere mention.

II. The graded system in relation to promotions, and pupils not easily graded. Our president renews the protest against making the system of grading, or the course of instruction an object in itself, to the detriment of the pupils. All general schemes find individual exceptions; but the need which all have of education, and the claim for it which they may righteously urge, are reasons for our thoughtful and earnest consideration of the cases that cannot be included in our present general arrangements. The current system of yearly promotions is in many cases a serious hardship; and the systems which provide for more frequent advancements in the higher grades deserve favor. We recommend these topics for future consideration, especially.

III. Industrial education, and a half-time plan. The school-system can not be expected to provide industrial instruction; neither the possibilities of the system of public schools, nor the demands of the people who sustain it, authorize us to attempt that; but since the needs of families often cause the withdrawal of pupils from school that they may be put to work long before they have acquired the practically useful instruction that we offer, to say nothing of mere culture, every suggestion of methods by which such pupils may be kept within the reach of our schools is worthy of attention. The half-time plan, already tried in several places with apparently good results, as shown in the address, is the most promising of these methods; and we advise the experimental introduction of it where circumstances seem to call for it and to favor it, and a careful observation of its results. The extension of it to the lower grades of pupils in our large towns and in cities may give us valuable lessons.

Respectfully submitted,

SAMUEL WILLARD,
E. W. COY,
S. H. WHITE.

RHODE ISLAND.—This little State has one of the ablest conducted Normal schools in the union. In the principal's report we find that for the year just closed the whole number of pupils during the year to be 156; number that entered the first term 50; number that had previously taught 17; number that had entered the second term 24; number that had previously taught 4. Employment of parent or guardian: Farmers, 43; carpenters, 13; mechanics, 5; grocers, 5; clergymen, 5; jewelers, 4; merchants, 4; teachers, 4; hotel keepers, 3; engineers, 3; merchant-tailors, 3; station agents, 2; lumber dealers, 2; tailors, 3; moulders, 2; blacksmiths, 2; coal dealers, 2; manufacturers, 2; physicians, 2; insurance agents, 2; pastry-cooks, stone-cutters, master builders, clerks, surveyors, millers, pilots, calico printers, undertakers, boarding-house keepers, railroad conductors, rope makers, wheelwrights, gardeners, machinists, temperance

agents, mill superintendents, letter carriers, architects, shuttle manufacturers, pattern makers, lawyers, tanners, factory overseers, piano tuners, brokers, tin pedlars, pork packers, bakers, steamboat captains, sailors, bleachers, morocco dressers, police officers, town clerks, book-keepers, furnace men, ship carpenters, sea captains, spring makers, cashiers of banks, shoe makers, one each.

The graduation exercises were held June 26th. Gov. Howard presented the diplomas.

IOWA.—*Crawford County*.—This is a new county, and has about fifty-four schools. The people take a lively interest in educational matters. Denison, a town of about 600 inhabitants has a beautiful school house erected at a cost of \$10,000. It has four rooms, all finished, though but two of them are occupied at present. A new department will be put in the coming year.

CONNECTICUT.—From the annual report of the Board of Education of the State, we take the following. 1647 school houses, which are classified as follows: good, 873; medium, 520; poor, 254; in addition there are 42 new buildings. The Normal school is in prosperous condition. The salary of the principal, Mr. J. N. Carleton, is \$3,000 per annum; the vice-principal, Mr. Wm. B. Dwight, receives \$2,100.

The new desks and furniture have added much to the comfort and attractiveness of the school. The total expenditures of *the last school year*, to August, 1872, were \$12,078.78. The amount expended thus far during *the present school year* is \$9,261.99. It is the purpose and expectation of the board not to exceed the appropriation

PERSONAL.—S. S. HAMILL, for the past five years connected with the Illinois Wesleyan University, has accepted the chair of Elocution and Belle Lettres in the North Missouri State Normal School, Kirksville, Mo., at a largely advanced salary.

L. M. HASTINGS, from Ottumwa, Iowa, goes to Litchfield, Ill. Welcome to a live man. We have room for all such if Iowa does not need them.

Miss ETTA DUNBAR remains at DeKalb another year, the fourth, at a salary of \$1200.

WM. JENKINS remains at Ottawa.

O. F. MCKIM assists in the high school at Decatur. He is also candidate for reelection to the county superintendency.

S. W. GARMAN, Normal class of '70, afterwards principal of Mississippi Normal School, recently graduated from the scientific school of Harvard, with highest honors, and a \$1000 scholarship. He goes to Europe.

Miss HELEN THOMPSON, late principal of one of the Peoria ward schools, is made superintendent at Henry, Ill.

J. S. MCCLUNG takes charge of the schools at Delevan, Tazewell county.

J. THORPE, formerly of Fulton, Polo and La Salle, goes to Atlanta, Logan Co.

DeWitt ROBERTS, of Normal class of '73, takes the schools of Beardstown.

LEWIS C. DOUGHERTY is elected for New Rutland.

ARTHUR EDWARDS leaves Dartmouth for a year to assist Mr. N. C. Dougherty at the Rock River Seminary.

W. B. POWELL, Supt., and THOS. H. CLARKE, Principal of High School, Aurora, are appreciated. The salaries are respectively \$2500 and \$1800.

GEORGE BLOUNT, Normal class of '72, goes to Forrester.

N. C. DOUGHERTY, late principal and proprietor of Morris Classical Institute, takes charge of the Rock River Seminary, one of the oldest and best private schools in the State.

O. S. WESTCOTT is back again in the Chicago High-School.

E. P. TILESTON, of the old and reliable firm of Brewer & Tileston, is dead. This will require some changes in this house.

W. H. V. RAYMOND, is the agent of Harper Brothers for Kansas and Nebraska.

Miss ESTHER M. SPRAGUE, is principal of the Lincoln street school, Chicago.

J. M. G. CARTER, of Shawneetown, Ill., has a school at Little Rock, Ark.

GEO. COLVIN and GEORGE MASON, remain at Pekin.

ILLINOIS NORMAL.

We herewith present the names of the graduates of the Illinois Normal University since its foundation. It is believed the names and numbers are correct.

1860.—Sarah M. Dunn, Elizabeth J. Mitchell, Frances A. Peterson, Mary F. Washburn, Enoch A. Gastman, Peter Harper, Silas Hays, Joseph G. Howell, John Hull, Edwin Philbrook.

1861.—Sophie J. Crist, Amanda O. Noyes, J. H. Burnham, Aaron Gove, Moses I. Morgan, H. B. Norton, P. R. Walker, J. H. Dutton.

1862.—Sarah E. Beers, Elizabeth Carleton, Helen F. Grennell, Esther M. Sprague, Emma M. Trimble, L. D. Bovee, James F. Ridlon, L. H. Roots.

1863.—Mary A. Fuller, Sarah J. F. Gove, Abbie R. Reynolds, Sarah A. Stevenson, W. D. Hall, E. D. Harris, J. H. Thompson.

1864.—Harriett E. Dunn, Anna P. Grennell, Edith T. Johnson, Isabella Moore, Harriett E. Stewart, Geo. Colvin, L. B. Kellogg, Philo A. Marsh.

1865.—Olinda M. Johnson, Almenia C. Jones, Lucinda J. Stanard, Bandusia Wakefield, Thomas J. Burrill, J. W. Cook, Wm. Florin, David M. Fulwiler, O. F. McKim, Adolph A. Suppiger, Melancthon Wakefield.

1866.—Harriett M. Case, Martha Foster, Harriett A. Fyffe, Margaret McCambridge, Mary E. Pearce, Alice B. Piper, Helen M. Plato, Sarah E. Raymond, Olive A. Rider, Julia E. Stanard, Nelson Case, Philo A. Clarke, John Ellis, Jr., Joseph Hunter, Richard Porter.

1867.—Emily C. Chandler, Emily H. Cotton, Nellie Forman, Mary W. French, Eurana G. Gorton, Mary R. Gorton, Mary Pennell, Onias C. Barber, J. R. Edwards, G. E. Hinman, Cyrus W. Hodgins, F. J. Seybold, J. S. Stevenson.

1868.—Ruthie E. Barker, Ann Eliza Bullock, Jemima S. Burson, Lydia A. Burson, Etta S. Dunbar, Anna C. Gates, S. Grace Harwood, Lucia Kingsley, Eliza A. Pratt, Emma T. Robinson, Mary J. Smith, Cornelia Valentine, Elma Valentine, Clara E. Watts, Stephen Bogardus, Wm. A. McBane, Henry McCormick, J. R. Rightsell, Wm. Russell.

1869.—Lizzie S. Alden, Melissa E. Benton, Ella K. Briggs, Lucretia C. Davis, Jane E. Pennell, Maria L. Sykes, Helen M. Wadleigh, Ben. C. Allensworth, Alfred C. Cot-

ton, Chas. H. Crandell, H. R. Edwards, Wm. R. Edwards, J. W. Hays, Chas. Howard, Isaac F. Kleckner, Geo. G. Manning, Geo. W. Mason, Chas. W. Moore, C. D. Mowry.

1870.—Louisa C. Allen, Barbara Denning, Alice Emmons, Cara E. Higby, Emma A. Howard, Margaret E. Hunter, Maria L. Kimberly, Mary D. Le Baron, Letitia A. Mason, Adella Nance, Adelaide V. Rutherford, Fannie Smith, Armada S. Thomas, Marion E. Weed, B. W. Baker, Joseph Carter, Robert A. Childs, James W. Dewell, R. Arthur Edwards, Sam'l W. Garman, J. W. Gibson, Benj. Hunter, J. W. Lummis, John H. Parr, Levi T. Regan, W. H. Richardson, J. W. Smith.

1871.—Charlotte C. Blake, Isabella S. Houston, Julia E. Kennedy, Harriett E. Kern, Celestia M. Mann, Frances J. Moroney, Frances L. Rawlings, Isabel S. Rugg, Frances E. Shaver, Emma G. Strain, Frances J. Weyand, W. C. Griffith, H. F. Holcomb, A. T. Lewis, Tilghman A. H. Norman, Edgar D. Plummer, James O. Polhemus, J. R. Richardson, R. Morris Waterman, J. X. Wilson, John P. Yoder.

1872.—Anna G. Bowen, Martha A. Flemming, Lenore Franklin, Mary C. Furry, Clara S. Gaston, Anna M. Gladding, Rachel Hickey, Sara C. Hunter, Alza A. Karr, Martha G. Knight, Julia F. Mason, Emma A. Munroe, Julia Moore, Mary V. Osburn, Flora Pennell, Alice B. Phillips, Louise Ray, Alpha Stewart, Gertrude M. Town, Edith Z. Ward, Robert H. Beggs, Geo. Blount, James M. Greeley, Frank W. Hullinger, Elisha W. Livingston, Thomas L. McGrath, Samuel W. Paisley, Frank E. Richey, Espy L. Smith, John H. Stickney, Wm. R. Wallace,^o James M. Wilson, Edwin F. Bacon, Chas. D. Mariner.

1873.—Charles DeGarmo, Anna V. Sutherland, P. L. Brigham, Lura M. Bullock, Geo. M. Lecrone, John B. Stoutemeyer, L. Effie Peter, H. Amelia Kellogg, J. Lawson Wright, Mary M. Cox, Felix B. Tait, Mary I. Thomas, Arthur Shores, Ida L. Foss, Walter C. Lockwood, Ellen S. Edwards, Jasper F. Hays, DeWitt C. Roberts, Emma W. Warne, Mary Hawley, Erneis R. E. Kimbrough.

MODEL HIGH SCHOOL.

1865.—Wm. McCambridge, Gertrude K. Case, H. C. Crist, Chas. L. Capen, Robert McCart, Jr., Clara V. Fell, Hosea Howard, Jr.

1868.—Annie M. Edwards, R. Arthur Edwards.

1869.—Gratiot Washburne.

1870.—Wm. Burry, Almira A. Bacon, W. H. Smith, Nellie H. Galusha, W. Duff Haynie.

1871.—Alice C. Chase.

1872.—Chalmers Rayburn, N. B. Reed.

1873.—J. Dickey Templeton, M. Louisa Abraham, Edmund J. James.

BOOK TABLE.

M. TULLII CICERONIS DE OFFICIIS. BY E. P. CROWELL, A. M. ELDREDGE & BROTHER, Philadelphia.

This is another volume of the Chase and Stuart Classical Series. Like the volumes that have previously appeared, it is neat, compact, and convenient. The references in the notes are to the principal Latin Grammars in use in our schools. The introduction to the notes contains information respecting Cicero, and the work here presented which

will be found useful in giving the pupil a better understanding of what he is reading. The synopsis of the entire treatise which follows the introduction is also a commendable feature. The notes appear to have been prepared with more care than those in some of the other volumes of this series. The *De Officiis* is one of the productions of Cicero's riper years, and it is free from the offensive egotism which is so constantly met with in his earlier orations. As an exposition of the ethical views of one of the foremost men among the ancients it will never cease to be read with interest.

Rolfe's Shakspeare—*Merchant of Venice, Tempest, Julius Cæsar, Henry the Eighth*, four volumes. Edited with notes by WILLIAM J. ROLFE; New York, HARPER & BROTHERS, 1872. Price, 90c.

It is no exaggeration for us to say that no books in our possession afford us more real happiness than do these little volumes prepared by Mr. Rolfe. We believe the purity of the text has been conscientiously maintained, and the notes exceed in fullness every edition we have seen, that was at all suitable for school use. The time seems near at hand when no high-school in the land will pretend to turn off its pupils without six month's work in this English classic. Already many of our western schools are doing this. These volumes are what many a teacher has looked and longed for in years that are passed. Now we have them at hand, cheap, convenient for class use, and nicely and tastefully bound. The pupil will find as much or even more than he needs for the comprehension of the text, and yet work enough is left for study. The little sketch of the life of Shakspeare, illustrated, in the "Merchant of Venice," is itself worth to any class in English literature, the price of the book. The history of the play is just what is wanted. It is to be hoped that Mr. Rolfe will not close his labors in this direction with these four volumes.

A second use for these convenient volumes is in public and club readings. How many of us have been annoyed by huge volumes in our hands or in the hands of the reader, which from their cumbrousness detracted from the pleasure and the profit. These little books are admirably adapted to the purpose and with the letter-press large enough to be easily read by ordinary light

Exposition of the Grammatical Structure of the English Language, by JOHN MULLIGAN, A.M. New York, D. APPLETON & Co.

This volume of 574 pp., is all that the title indicates. Any extended notice at this day seems needless. It has long been the standard book in high-schools and colleges, and can be placed on the reference table in every grammar school with propriety. The philosophy, history and idiom of our language is set forth in a way excelled by few if any.

A Grammar of the Latin Language, 276 pp., by G. K. BARTHOLOMEW; WILSON, HINKLE & Co., Cincinnati, Ohio.

One who, in these days, undertakes to prepare a new Latin grammar, should have either some new matter to offer or some improved method of presenting what is already old. Tried by these tests, the work before us will fully establish its right to exist. The results of the most recent researches of Latin scholars, made in the light of comparative philology, we find here reduced to order and presented in a form that brings them within the comprehension of the average pupil in our preparatory schools. Most of our Latin grammars have been written by college professors who have too often had in

mind the needs of college classes, rather than of boys and girls pursuing a preparatory course. This grammar has the advantage of being the work of a thorough scholar, who has had large experience in fitting boys for college, and who has, therefore, had the best opportunities to learn the needs of such pupils. At the same time, the work is comprehensive enough for the ordinary use of advanced students.

We find several things that are new in the arrangement of matter, and we believe that the most of the changes are improvements. For instance, our author breaks in upon the time-honored, traditional order of nouns, adjectives, pronouns, verbs, &c., and places the verb first after the introductory topics. It is the practice of many of our best Latin teachers to begin with the verb, and we know of no reason why it should not be placed first in the grammar. Again, the cases are re-arranged; the direct cases—nominative, vocative, and accusative—which are so often the same in form, being placed first, and then the genitive, dative, and ablative. To those who have learned the paradigms under the old arrangement, this innovation will at first seem a little unnatural, but it certainly possesses some advantages. Throughout the syntax, the illustrative examples are in each instance given before the rule. It is a part of the author's design to have more made of these examples in teaching the syntax than has heretofore been done. To this end they are given in the precise language of the authors from whom they are taken, and not in the mutilated form in which many of them appear in our Latin grammars. The reference to the work and the passage where the example may be found is also given with each one, and finally a translation follows in which the word or words illustrating the rule are indicated. Our author has shown unusual skill and taste in the translations of these brief passages, so that they are scarcely less valuable as specimens of elegant English rendering of the Latin than are the Latin examples themselves, considered merely as illustrations of the rule. We doubt not that these will be found of great service in connection with prose composition.

The alphabetical list of nearly three hundred nouns, embracing the principal ones that have any peculiarity of form or use, and arranged for convenient reference, will be found very useful.

The work throughout is characterized by clear, concise, and philosophical statement. If we were called upon to specify the portions which have seemed to us to possess especial excellence, we should name the treatment of the verb in the etymology, and the discussion of the subjunctive mode in the syntax. No subject in Latin grammar presents more difficulties to the teacher or the pupil than the subjunctive mode. In fact, the difficulty of the subject has led some to decry it altogether. Mr. Bartholomew, however, has presented it in a manner that seems to us at once philosophical and *teachable*. The treatment of the verb, too, pleases us much. By adopting the stem method and classifying verbs into vowel stems and consonant stems, greater simplicity and clearness are secured, and uniform principles of formation are seen to apply through all the conjugations.

The Roman pronunciation is put prominently forward. Although this has not yet met with general acceptance, it has the sanction of not a few of the best Latin scholars in this country and in England, and has already been adopted in some of our best schools. It is a significant fact that the two latest and most improved Latin grammars, viz: the one now under consideration, and Allen & Greenough's, have adopted this

pronunciation. The English method of pronouncing Latin is given in the appendix, so that those who prefer the old way can follow it here.

The publishers have done their work elegantly and substantially. The page is neat and attractive; the paper and type are all that could be desired.

Insanity in its Relations to Crime. By WILLIAM A. HAMMOND, M. D. D. APPLETON & CO., New York.

In these days when it almost seems as if crime were holding high carnival, and when the mere fact of the commission of an offence seems too often to be regarded as *prima facie* evidence of insanity on the part of the criminal, anything from so eminent an authority as Dr. Hammond upon the relation of insanity to crime, will be read with interest. The purpose of the author, in this little book of seventy pages, is to show that certain classes of so-called insane people possess the power of self-control, are fully aware of the effect of their criminal acts, and are hence responsible and should be punished like other criminals. He contends that "the individual who has sufficient intelligence to know that pointing a loaded pistol at a human being, cocking it, and pulling the trigger are acts which will cause the death of the person against whom they are directed, should be subjected to the same punishment for a homicide as would be awarded for a like offence committed by a sane person." As regards "irresistible impulse," he says it is doubtful whether it ever exists even with the insane. Emotional insanity and volitional insanity, under cover of which so many scoundrels now-a-days escape their just deserts, he would generally allow as much extenuating force as "heat of passion," but not even so much as this in cases where there has been a deliberate purpose to commit murder or other crime. He shows the absurdity of attempting to determine the sanity or insanity of a person who has committed a crime by considering merely the mental condition of the prisoner at the time the offence was perpetrated. "It is no more possible," he says, "for a person to be insane without other evidences of disease than mental derangement, than for pneumonia to exist with no other symptoms than disturbed respiration, or for valvular disease of the heart to be restricted in its manifestations to irregularity of the circulation of the blood. The doctrine that an individual can be entirely sane immediately before and after any particular act, and yet insane at the instant the act was committed is contrary to every principle of sound psychological science." There is much good sense and much that ought to be good law in what our author says on these points. We should hear less about "emotional insanity" and "irresistible impulse," if it could once for all, be settled that they constitute no excuse for crime. Let this be generally understood, and it would have a wonderful effect in suppressing emotion and checking impulse at the critical moment. The only forms of insanity which Dr. Hammond would allow to absolve one from responsibility, and, therefore, from all punishment except sequestration, are "such a degree of idiocy, dementia, or mania, as prevents the individual from understanding the consequences of his act, and the existence of a delusion in regard to a matter of fact which, if true, would justify his act." The book discusses in an able manner one of the gravest and most difficult questions connected with our criminal jurisprudence, and one that has an important bearing upon the safety of society. The arguments presented are worthy of the consideration of every thoughtful person.

PERIODICALS.

The *Maine Journal of Education* for July is No. 7 of vol. VII. This monthly goes on in the even tenor of its way. It varies in merit from month to month, less than its contemporaries. It is always good. Its *corps* of editors is headed by A. P. Stone, of Portland. Eleven assistants are from nine other towns. We have observed that the teachers in Illinois from Maine, are warmly attached to this journal.

The *National Normal* for June has put in its modest appearance. The *editorial* is placed first. We are inclined to think this is a good plan. We have observed one other monthly that does the same thing. Many items of educational news are compiled for the *Normal*. They are not always new or reliable, but are, we think, generally read, and that fact alone is encouragement to the proprietors.

The *Ohio Educational Monthly* for July, contains as usual many good things. The opening article on "The Kindergarten," would please even Miss Peabody, herself. The principals of Illinois at their annual meeting in '72, listened to Mrs. Peabody for the most part of two days, but so far the little three-year olds are kept from all schools. An article from W. D. Henkle on words, again convinces us that the writer must be a reveler in etymology. He has found more new words than we had "ever dreamed of." The editorials in this monthly justly give it place among the first school magazines in the land. It has not been found necessary for this editor to place the editorial first in the book. The well-considered opinions are extensively quoted, and have much influence in the educational world. We hope to see the institute question exhaustively discussed.

The Educationist.—A new monthly from Indianapolis, Ind. Many of our exchanges will have it, "The Educationalist." This has for one of the editors the able superintendent of Indianapolis' schools, and the editorials ring out with no uncertain sound. When Mr. Shortridge speaks, the hearer does not complain of ambiguity. Indianapolis is prolific in giving birth to publications. The one before us deserves a long life.

The Nursery.—History furnishes no such instance of the success and circulation of a childrens' periodical. This magazine is *sui generis*. Of the many attempts to imitate, all have failed. While all can observe the interest and pleasure with which the children look for and read it, few can tell how it is done, much less go and do it. We have the bound volume for 1872, or rather had it, for our two six-year-olds have demolished it in a fair and legitimate manner—literally read it to pieces.

We are proud of such an American journal for children. Subscriptions sent through the SCHOOLMASTER.

Harper's Weekly is a necessity for every teacher in the land. It is not one, but many things. The illustrations furnish abundant information of current events. The editorials are among the soundest and truest in the land, while the stories are free from all degrading and demoralizing sentiments. The cost is nothing compared to the benefits arising from the weekly receipt of the best illustrated weekly in the world.

PUBLISHERS' DEPARTMENT.

CINCINNATI, O., March 24, 1873. The committee on Course of Study and Text-books reported that they had examined McGuffey's series of Readers (now in use), and Harpers' United States Readers, and heard the statements of the representatives of each, and they were unanimous in the belief that a change of text-books would not be beneficial. Adopted unanimously.—*Commercial*.

E. B. M. Keever, B. S., Moline, Rock Island County, Illinois, desires a situation as principal in a graded or union school.

The Autobiography of Abraham Lincoln, written by himself, has been engraved in fac-simile, and arranged with an excellent portrait of our martyr President for framing. Few pictures can adorn the walls of an American home so appropriate as is this. The work has been done by J. R. Osgood & Co., for J. W. Fell, of Normal, and the whole business for the United States, been placed in the hands of H. C. Fell, Normal, to whom all letters of inquiry should be sent. It is an appropriate picture for our school-rooms as well as for our houses. The handwriting of Mr. Lincoln, as well as every thing that he ever touched, is dear to us all, and this picture makes the privilege of daily view, possible.

RECREATION.—THE SCHOOL STAGE.—Messrs. Wilson, Hinkle & Co., (Cincinnati and New York,) have just published *Venable's School Stage*, a collection of juvenile acting plays, for school and home. Sent by mail post-paid on receipt of price, \$1.25. A fuller announcement will appear in the next number of this journal.

Knowlton's Universal Bath is meeting with large sales. Messrs. Westcott, Roberts, Boltwood & Ethridge, are among those who recently invested in the article, while Mr. Smith was at Ottawa.

NORMAL, ILL., April 4, 1873.

Some ten month's use of "Knowlton's Universal Bath," has confirmed the impression of the first few trials. It must have a place in the list of family comforts.

Our appreciation of its value was enhanced last summer, by finding that its economy of water permitted the luxury of a full bath even in time of drought.

The rubber bids fair to last for years.

THOMAS METCALF,
Prof. of Mathematics, State Normal University.

NORMAL, ILL., April 5th, 1873.

About eight months since I purchased "Knowlton's Universal Bath." It has surpassed my most sanguine expectations. I think it more convenient and much more agreeable than ordinary bathing arrangements.

No ordinary consideration would induce me to be without it. JOHN W. COOK,
Professor of Elocution, State Normal University.

The heating and ventilating of our school-rooms is the great question of the time. Read what is said in our advertising columns of the Bennett Heater. It is the greatest improvement yet made.

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER.
Volume VI.

ILLINOIS SCHOOLMASTER.

A JOURNAL OF EDUCATIONAL LITERATURE AND NEWS.

VOLUME VI.

SEPTEMBER, 1873.

NUMBER 64.

A PROTEST AGAINST VALEDICTORIES.

A valedictory in a College, Seminary, or High School, is popularly understood to be the farewell address given on commencement day by one of the graduating class to his class-mates and the faculty of the institution to which he belongs, and is termed "the highest honor."

Now, an honor is, or ought to be, some favor or reward conferred upon an individual in token of distinguished worth; and the question naturally arises, do valedictories carry out in reality what they are understood to do? In other words, is a valedictory in reality an honor to the one upon whom it is conferred? Perhaps the manner in which valedictories are chosen may help us to solve the problem. I believe the following methods are those in general use. 1st. By a system of marking. 2d. By the vote of the faculty. 3d. By the choice of the class. It is evident that two or even all these methods may be sometimes combined. When the first method is used, the marks are taken into consideration for scholarship, attendance and deportment, and these for the entire course, usually of four years. Now, supposing in any given class, "A" is an earnest, plodding, faithful, thoroughly conscientious scholar; but with all his diligence and devotion, his marks for scholarship do not average more than eight on a scale of ten; for even a college faculty cannot manufacture brains. "B" is a brilliant, quick-witted, talented young man with a retentive memory and great powers of concentration. His marks for deportment are not always perfect; but his recitations are always marked ten, although he spends much less time in their preparation than "A." Of course, the faculty, going

by the marks, must necessarily award the valedictory to "B"; and, I ask, where is the justice of giving the highest honor to him simply because nature has already endowed him with superior gifts? Does not the honor in point of fact belong to him who has most earnestly striven for the mastery of himself and his studies? And yet, by the marking system, that scripture is made to be emphatically fulfilled which says: "To him that hath shall be given, and from him that hath not shall be taken away, even that which he seemeth to have." If the second method is chosen, the result is not apt to be very different; in fact, the discrepancy between justice and "the honor" is generally even greater than in the other case; for motives of policy creep into and influence the counsels of the most high-minded deliberative bodies. Thus here again the fluent, graceful orator is preferred to the earnest, plodding but less brilliant student. And if the valedictorian is chosen by the class, then, strictly speaking, there is no honor whatever about it; for the old saying is a true one, "kissing goes by *favor*." To be sure it is a compliment, and a very handsome one, to the successful individual; but this method almost invariably results in the choice of the most popular one in the class without regard to other qualifications. And here perhaps it may be well to state, that it sometimes happens that distinguished worth and distinguished talents, are combined in the same person; but this is one of "the accidents of life," and by no means affects the principle here contended for. The sum and substance of the matter is, that, whichever method is selected, he (or she) is chosen valedictorian who is, on the whole, considered the most shining one in the class, who will make the best appearance on commencement day, who can write the best essay, or deliver the finest oration. I know of a young lady who through the first three years of her course at a ladies' boarding-school, was inattentive to books and openly disobedient to teachers; but during the last year she changed her demeanor, became studious and tractable and was given "the highest honor," simply because she was a brilliant, popular girl, and important purposes could be subserved by this means. I know of a young gentleman who had been unmistakably and repeatedly disrespectful in demeanor during the last of his four years' course; and yet, inasmuch as in neglect he was the bright, particular star of the class, the valedictory was unhesitatingly conferred upon him. I confess I can see no justice, no right, no honor either to pupil or

teacher in such a course. Perhaps there is no objection to having a class so arranged on graduating day as to bring out its best points in the best manner. There can be no objection to such a grouping of individuals as shall make the most finished appearance in a literary and artistic sense, *if it is only understood by the public that this is the design, and that the arrangement of the essays and orations has nothing whatever to do with the actual worth of their possessors.* The great error lies in its *real* arrangement according to motives of policy, and the *ostensible* arrangement according to motives of "honor." In this way valedictories have become a sham and a humbug, and the sooner they are abolished the better for all parties concerned. There is no time or space to discuss in this paper the influence of valedictories upon valedictorians, and the other members of the class.

MARY ASHMUN.

WRITING RECOMMENDATIONS.

Were it not for the dignity of the great names involved, there would be something ludicrous in the testimonials given to text-books.

Much might be written on the way many of these documents are secured. Thus, few men can resist the blandishments of an "autograph copy." The delicate compliment must of course be acknowledged, and the commendation of the recipient is expected to sell many more.

In the line of school text-books, one who attempts to keep up with the notices, sees many things to excite wonder. For instance, a circular from the publishers of McGuffey's Arithmetics contains a strong commendation of those works from the Supt. of Schools of the nearest city, and I am about investing money in sample copies, when a subsequent mail brings an equally strong endorsement of Watson's Independent Arithmetics from the same pen. As a sample of this kind of writing I submit the following, omitting names and dates:

"It gives me pleasure to add my testimony in favor of ——— Readers. They seem to be just what is needed, and I am heartily in favor of having them adopted in our schools.

Signed,

Principal Schools."

"I am pleased with the ——— Series of Readers, and think them especially deserving of commendation. Were I to remain in this school another year, I would use my whole influence to secure a change." Signed as above.

This kind of recommendation is written by the class of teachers known as "sponges." They have an "itching" palm for school books, and will commend any thing if thereby they can secure a copy.

Another matter of interest in this line is the ingenuity manifested by some teachers in writing big recommendations that say nothing. They have a theory that all new books have their good points, and that a man cannot go far wrong in saying a good word for them all. It would be easy to fill a column in illustration, but your readers will have no difficulty in citing instances to the point. They are far too common. Many names, that we as teachers, delight to honor, are associated with such documents, and we are fast losing confidence in recommendations to which their names are attached. The trouble is, such men cannot say *no*. Let them for the sake of those to whom they are set as ensamples learn where to make a discrimination. Many have bought books endorsed by them, and found to their pecuniary discomfort that they were utterly worthless—or at least contained nothing new.

But while teachers are much to blame in this matter, more blame oftentimes attaches to the publishers. Enterprise is often manifested in strange ways. Of course they are all honorable men and yet many will not hesitate to garble a teacher's opinion for the sake of a recommendation. A teacher occupying a high position, and one who is known to be very conservative in giving his endorsement, was complaining in my hearing not long since, of the publishers of — Grammars. A copy was sent him with the request that he give a careful examination and a candid statement of his opinion. He wrote at some length, condemning the work and criticising it sharply. Imagine his surprise to find them publishing his *commendation*. By cutting here and there, where, in order not to condemn the work *in toto*, he had let up a little in his strictures, these publishers had succeeded in securing a pretty fair endorsement, and my worthy teacher now finds himself on the wrong side of the fence, with no intelligent idea of how he came there.

But there is probably no other way in which publishers deceive so much as in *suppressing dates*. A notable illustration of this may be found in the last "SCHOOLMASTER," in the standing advertisement of

Webster's Dictionaries. Not that these publishers are more guilty in this respect than others, but the inconsistencies are so apparent that one who reads with his eyes even half open cannot help noticing, and if he notices he must needs be amused. The burden of the advertisement is, praising the etymology of Webster's Dictionaries. In that advertisement I find the recommendations of Daniel Webster and Dr. Beecher, both of whom were *in their graves* (Webster more than ten years) before the book they are represented as endorsing was published. I see also the endorsement of John G. Saxe and Geo. Bancroft. From an old circular I find these endorsements were given to one of the *old editions* of Webster. The funniest part of this matter is yet to come. Further down the page I find this extract from the *N. A. Review*. "In English all the older authorities like Richardson and Webster (in his earlier editions) are simply to be thrown away as rubbish or worse."

I wonder how Saxe and Bancroft feel at this stricture on their judgment on Dictionaries. Black Dan and Dr. Beecher are presumably past all feeling.

Another prolific source of amusement is the book notices in our educational journals. It looks to us "outsiders" as though the publishers and editors are in league to "scratch backs" and "tickle elbows" for mutual benefit.

In this light how refreshing is the following from the *Kas. Ed. Journal* for June '73. "We have not flinched from duty when it has said *search a text-book* even at the expense of a page of advertising for nearly a year." At the top of that column I see the name of JOHN A. BANFIELD, publisher. Put his name in large caps, Mr. Mr. Editor, so the people can read it. Let them know some little good can and does come out of that Nazareth.

By the way friend Gove I notice the brave words on this subject were not at the head of the Book Notices in the July No. These words first attracted my attention to the "SCHOOLMASTER," and made it a favorite journal with me. Have you struck colors? Run them up again and *nail* them there. With Illinois and Kansas in the van we'll drive out the money changers, and a voice of authority shall yet commend the purification of this temple of our educational faith.

COUNTRY SCHOOLMASTER.

THE SCOTCH FREE SCHOOL ELECTIONS.

American newspapers seem to have been too crowded to give us the requisite information on recent educational movements in Scotland. Scotch papers of late March and early April, devote much space to the subject of the school elections. The British parliament recently passed an act for the establishment of public free schools in Scotland, and elections for the first local Board under that act, occurred generally near the close of March. An analysis of the provisions of the act must be deferred, but some things of interest to the schoolmaster, to the politician and to students of sociology generally will appear in the brief synopsis of proceedings at these recent elections, from which the election in Glasgow is here selected as a type of the rest.

The great point of division was religious instruction in the schools, some advocating the catechism besides the use of the Bible, some opposing all religious teaching. Various parties proposed candidates till there were thirty-nine for fifteen places. Tickets were prepared on which the names of all the thirty-nine were printed, and the voter marked a cross against the names of his choice. The cumulative system, of which we in Illinois had a little experience in electing representatives to the State legislature last fall, was a part of the Scotch plan. The voter could divide his votes as he chose, or "plump" his full number of votes for one candidate.

Every man or woman of full age, occupying property of the annual value of four pounds (near twenty dollars) was entitled to vote.

In Glasgow fifty thousand (52,804) votes were cast out of one hundred thousand (101,871) registered voters. The number of "illiterates" was noticeable. The presiding officers marked 4337 tickets for those who needed their help.

Many tickets (1618) were thrown out for some neglect to comply with technical details, especially for casting in the paper with no marking to show for whom of the thirty-nine candidates, the elector would vote. The Catholics centered their force on three candidates, giving each near fifty thousand (50,000) votes, and put them at the

head of the elected list, except that one candidate especially popular and the champion of the Bible reading received over one hundred thousand votes by the enthusiastic "plumping" of his friends. The curiosity of results in this cumulative voting is seen in the wide range of votes for successful candidates (108,264 for highest, 16,017 for lowest), and in the high position secured for the representatives of a minority by the combination of friends who did not mean to waste their votes. The result in Glasgow seems to be regarded as securing a fair representation of varied interests. The Free Church has five representatives. The Establishment, and the Roman Catholic each three, the United Presbyterians, the Unitarians, the Episcopalians, and a minister of The Church of the Future, each one.

The Scotch papers were furnished with abundant items, serious and comic, by the incidents of this first election. Awkward requirements develop themselves already in the reduction of the law to practice. Thus an election for a Board of not less than five members is required in a district containing only three voters. In one town an elected member proposed to resign in order to be a candidate for Treasurer and Secretary of the Board, when it seemed that the Board was not competent to accept his resignation, and the case pends legal examination.

In Edinburgh, "plumping" put a Catholic clergyman at the head of the list with twenty thousand votes, then come two ladies with successively two thousand less, and so down to the last of fourteen protestants of various form to the lowest elected with six thousand votes.

The first business of these newly formed Boards is, by examination of school needs and school facilities through census taking and otherwise, to determine what they have occasion to do. Then will follow reports to parliament and additional legislation. A whole new system is to be constructed, to which is attached in advance the compulsory education act.

A Scotch paper well remarks that before the School Board can determine how the public schools shall be regulated in the matter of religious instruction, there must first be schools to regulate, by which time, with careful exercise of knowledge, prudence and forethought, in the magnitude and many-sidedness of the duties before them, the

strength of friends of schools may be profitably used in arranging with those who control existing schools and in instituting others so as to form a system commensurate with the wants of the population.

JAMES H. BLODGETT.

ROCKFORD, ILL., July, 1873.

UNITY OF ACTION IN THE SCHOOL-ROOM.

This is a subject to which too much importance can hardly be attached. Secure this, and you add to intellectual growth and prosperity. Secure this, and disorder yields to order, and chaos to method and symmetry.

Go into machine shops, from the one which makes the locomotive down to the one which makes the finest cambric needle, and you find that the work of each particular department presupposes that of the next. Go into the manufactories, from the one where the coarsest woollens down to the finest laces are made, and you find the same marked symmetry. In no case is the work performed so as to be detrimental to that which has been done or that which is to follow.

Is symmetry not of equal importance in the school-room? Is it found? One has only to visit our schools, graded as well as common, to become fully sensible of the deficiency. So few have methods and courses having the least semblance. Indeed, in many cases, one is puzzled to discover *any* premeditated plan. Unlike methods and courses would matter little, only the results attained are just as different, and, not unfrequently, of about the same worthless character.

Can the work of the school-room be so arranged that we can have symmetry there? If it can it will add millions to our revenue, besides adding centuries to the school-life of our children. School-room work should be arranged, if possible, so the present unavoidable change of teachers would not be so disadvantageous. If a course of study, adapted to the common schools of the State, could be agreed upon by the county superintendents, although it might only approximate what it should be, it would, I think, be a step in the right direction. This course should consist of a very definite statement of topics on each branch required by law, which, when mastered, would constitute a fair

practical common school education. A definite statement regarding what the pupils are expected to know about each topic before it is considered sufficiently mastered, should also be made; for this would give rise to much variety of opinion. Proper care should be given to make a wise selection of topics. It would be better practically to give too few than too many. Pupils and teacher should know that a definite amount, more or less, is to be mastered every term in each branch pursued, before passing further. This would require the work attempted to be reviewed over and over, till the pupils are thoroughly familiar with it in all its bearings.

To have a clear idea of what is expected of them, and also to know that they cannot pass a certain limit without doing the work in the manner prescribed, certainly would be an incentive to study. Would pupils be so apt to try to pass over the work in the old slipshod manner so common? Would the careless indifference which so many manifest when they meet a difficulty requiring a little hard brain-work, be so frequent? It would stop pupils "going through 'Rithmetic,' Grammar and 'Jography,'" from the age of thirteen or fourteen, every winter, till twenty-one, their last mental *status* little better practically than the first. It would prevent teachers riding their hobbies too far, by settling the questions "What" and "How much." These questions must be settled in *some* way before we can have entire unity of action, even among our teachers who have been trained together.

To make "Theory and Practice" a specialty is a valuable auxiliary to secure symmetry in the school-room. But its utility depends entirely upon whether the "theory" is practised. Not long ago I heard an examiner say to his class of teachers, "As it is *customary*, I shall ask you a few questions on the 'Theory an Art of Teaching.'" The rest must be inferred. To secure unity of action in the school-room will require time; yet its era might be hurried by more co-operation among educators generally. As a general rule, they are apt to favor none but their *own* "pet opinions." This is too often true, even when other views have been proved equally, if not more practical. It is true that diversity is essential to progress. But this is true only so long as differences act conjointly to a superior aim. Beyond that, diversity ceases to be a virtue. Some do little else than undo what others have done. It is a painful fact that this is, sometimes, really

necessary. But frequently it is done when the need is only imaginary. It would be acting more like intelligent beings to concentrate united effort on some *one* practical plan. This would stop the jangling about methods and what to teach. Continual contending concerning courses causes constant commotion. Besides it is very injurious to the success of any plan, however well grounded. We want more unanimity.

It is a curious fact that we have so few experienced teachers in our common schools. We have few in fact who can boast of even *five* years in the school-room exclusively, much less of ten or fifteen, which most of employments require to become master workmen. Is the same not true of the school-room work? Why, then, do so many quit the occupation early? Is the work not of sufficient importance, to merit master workman? Is developing the germ of the human mind in purity and usefulness, not a task which can be better accomplished by the softened touch of an experienced hand? What then? The chief reason that so many quit the occupation, is that the talent and energy essential for successful teaching, applied in other directions, yield larger incomes. This is another painful fact; and it will continue true as long as it is the prevalent opinion that teachers are paid too much now. "A-jack-at-all-trades and master of none," is an old adage which is too true of teachers of the present day. And it will continue to be so as long as they have to resort to so many ways to eke out a pitiful subsistence, "come fairly off from all debts," and, in imitation of the "busy bees" of all other trades and professions, lay up a little for future use.

That this state of affairs has much to do with the non-conformity found in schools of the present day, is self-evident. What must be done? The remedy is at hand, but the case is a desperate one. Public opinion must be changed. (The wealth and character of any community depends upon its intellectual progress and development.) Teaching must be made a profession—one which will take all the teacher's time and energy to keep pace with progress, and be considered fitted for so responsible a position. Apprenticed workmen must be required in this as in other employments. Unity of action must be secured in the school-room. We must have a oneness of purpose among all educators. We must, at least, secure a sameness of results attained by teachers in schools of the same grade.

T. S. KELL.

DEXTERITIES.

We, who have accustomed ourselves to abstract thought, love to educe practical plans from general principles. The generality of mankind—the *laity*, as German writers say—are quite opposed to us in taste; they claim practical methods of attaining visible results, first of all. Perhaps they may evolve general principles from their numberless dexterities; but, generally, they will not. If we train them for actual work, which the hand can perform, we shall confer some slight benefit upon the millions. If we try to begin with cogent and conclusive reasoning, we may help forward “here and there, some glorious variety;” I do not see that we are likely to accomplish more.

To specify: there is a plenty of logical argument in those primary arithmetics which assure the infant that “counting is expressing consecutive numbers in words.” I do not know much about the demonstrations, and my pupils, I am happy to say, know less. I cause children to learn the multiplication table at seven or eight years of age, and then I set them to multiplying, and so forth. It is mere routine, to be sure; but it is a routine which they will be able to turn to account in later life. The demonstrations, each of which has a “therefore” in it, are matters of routine, *not* likely to be applied to any future use.

I do not despise the logic of mathematics. I try to interest quite young pupils in colloquial discussion of the miscellaneous and other examples of practical arithmetic—not flattering myself greatly upon my success. I hold that any real introduction of the learner to the mysteries of mathematical reasoning, must be colloquial and informal in its character.

I used to attach great importance to the idea that it was not well to teach the child any thing that he could not understand. I tried to make my scholars see the reason of carrying one for every ten. But the use of the decimal scale is derived from a theory of numbers which finds its best expression in the general equation of the m th degree, and which no young student can comprehend. Since a complete explanation is impossible—since my classes must take much upon trust, I let them take as much upon trust as they will; and that is a good deal.

MURPHYSBORO, ILL., Aug., 1873.

TO TEACHERS IN WANT OF A PLACE.

About thirty times a year, on an average, I receive from a perfect stranger a letter, somewhat like this :

DEAR SIR :

I have heard of your schools as being in excellent condition, and I think I should like to teach with you. Are there any vacancies which I can probably fill? I have taught — years.

Address _____

Now let me say to all teachers in want of a place, that such a letter as the above—even if it is fairly written, and contains a stamp for a reply, which such letters often do not—is certain to do you no good. The receiver knows just two things about you ; that you have taught school and are wanting a place. He cannot tell whether he wants you at all unless he knows what your education has been, what kind of school you have taught, what you are best qualified to teach, what wages you are receiving and what you expect, and whether your desire for a new place grows out of a want of success in your present position. By all means give one to whom you apply, the best possible means of judging you, or else you may expect to receive a curt letter, saying that there are no vacancies at present—meaning none for you. Here is, in substance, a letter of a different sort, concise but covering a great deal of ground :

DEAR SIR :

Mr. ——— of your town suggested to me that you could help me in obtaining a situation.

I am a graduate of ——— Seminary. I send you a catalogue which contains the full course which I have taken. Besides the regular course, I took German and drawing, though I have taught neither. I teach vocal music in my school.

I have taught three years in the lower grades of the ——— Grammar School, at a salary of \$40.00 per month. I am offered \$45.00 to take the same place for next year. I think that I am worth more, or, if I am not, I prefer to earn the same sum in some other grade. I would take the highest grade of a grammar school at \$55.00 per month at the lowest. Or I would begin in a good high school as assistant at \$50.00 per month, if there should be a chance of promotion in case of success.

My age is 23. I am a member of the ——— church. Mr. ———,

principal of the school, or Mr. —, chairman of our school board, will, I presume, vouch for my character and success. —

Notice in the above, first, that the lady accounts in a natural way, for addressing you rather than some other stranger. Your fellow townsman is likely to know something of her.

Second, she tells what she has studied, and names certain extras which may be very valuable in a given school.

Third, she tells her experience, and the grade she has taught, and the grade she prefers to teach. She gives a reason for leaving her place. You have her word that she is not leaving because of failure. She has her ideas of salary, and of salary dependent upon position, and has confidence enough in herself to expect to deserve promotion.

Fourth, she refers you to men who are likely to know her thoroughly as a teacher, and leaves you to make such inquiries as you choose.

On receiving such a letter, if I have no vacancy for the writer, I keep the name for future use. Letters of the other kind are forgotten as soon as answered.

One word in regard to letters of application. Many of them carry upon their faces the reason of their failure. The scholarship which has not attained to the writing of a decent letter is not of the kind which we need in our schools. A letter directed to "Proffessor" —, speaks all too plainly of its author's ignorance before it is opened. The young lady who wrote herself down as a member of an "authordox" church was compelled to learn that the orthodoxy of the creed could not compensate for the heterodoxy of the spelling. The principal of a graded school of *two* grades, who requested to be addressed as "Professor —," was answered according to his folly.

There are generally vacancies for the best teachers. Room enough up above, though fearfully crowded below. But we cannot give vacancies to chance comers. In your applications, let us know what you can teach, how well you have taught it, and what you want for teaching. Have your price and mean it. Give us names for reference rather than a dozen testimonials. One evidence of success is worth fifty of "likely to succeed." By all means, save us writing more letters than are necessary to find out about you Y. S. D.

PULPIT FLOWERS.

I love the flowers. I love their tints and graces,
Their radiant beauty, and their odors sweet;
And every where I look on their bright faces,
I hold their presence sweet.

Poor is the home, though grand, that has no garden,
Where Spring's first breath in the pale snow-drop blows;
And where the perfect June to its fair warden
Pays fief in blushing rose.

Dear to my sight are blossoms at Love's altar,
That drop their fragrance on the timid bride—
White seals of faith, too strong and pure to falter,
Whatever lot betide.

Nor welcome less pale flowers before the chancel
That quivering hands upon the coffin spread,
Where their celestial beauty seems to cancel
The dust-doom of the dead.

Oh, beautiful alike in joy and sadness,
To crown the pallid bride of Love or Death:
Earth has no gloom beyond the spell of gladness
In their dear bloom and breath.

And so my heart falls not out with the fashion
That lifts the rose and lily to the place
Where reverent eyes gaze dimly on Christ's passion,
And faint hearts seek Christ's grace.

On either side the consecrated preacher—
Like priests of old that Moses' hands sustained—
These pulpit flowers recall the perfect Teacher,
By His own hand ordained.

With tearful eyes the lilies I consider,
Sweet symbols of my Father's love for me,
That make the world beside a false, vain bidder,
My end and crown to be.

The odors that are poured from each rare chalice
My ardent soul makes incense clouds, that rise
Beneath my prayers up to my King's fair palace,
In heaven's unfathomed skies.

Each perfect crest and crown of floral beauty,
By faith translated to my soul, becomes
A blossom on the barren rod of duty,
And covers it with blooms.

And if, than empty speech, I choose them rather,
Their sweet, dumb lips to eloquence shall break;
And from the lilies of my Lord I'll gather
Sweet lessons for his sake.

So, for the pulpit flowers that bloom on Sunday,
To whose sweet thought provides them, thanks and love:
I pray their hands twine brighter garlands one day,
In Paradise above.—*Harper's Magazine.*

PENIKESE ISLAND.

ANDERSON SCHOOL OF NATURAL HISTORY.

DEAR SCHOOLMASTER:—I believe I promised to give you a few items concerning the Anderson School of Natural History. This is not an easy task to fulfill. The school is so different in its aims and methods from any other with which I am acquainted, that it is difficult to make a comparison. Prof. Agassiz told us at the opening that the great object would be to make us students of nature. He said, "I shall never ask you what has been told you, or what have you read, but always *what have you seen?*" His constant admonition is, "throw away your text-books, which are generally written by men who know nothing about the subject upon which they write, and study the things themselves." By the way, that opening contrasted curiously with some that have been celebrated in our educational history. Not a speech was made. The great naturalist talked to us for about twenty minutes in an old barn. He stated in brief terms the conditions under which Mr. Anderson had given the island of Penikese, and fifty thousand dollars to found the school. A few remarks were made by two persons, and the opening exercises closed, having occupied in all not over forty-five minutes.

Again, the buildings here are in strange contrast with many in some parts of the country. As before stated, we met in a barn; for the first ten days this served as a dining room and lecture hall. We frequently listened to lectures from Prof. Agassiz before the breakfast dishes were removed. The first half of the new building was up and

covered when the school commenced, but it lacked windows and doors. In this we slept for four or five days before the windows arrived. Everything seems to be planned upon the principle of strict economy. Not a single tower or Mansard roof appears upon any of the buildings! As there is no real estate for sale in the vicinity the omission is probably accounted for. Suppose your readers compare these facts with the Southern Illinois Normal School, for instance.

When the buildings are all completed every pupil will have a private room for sleep and study. Also, a table and aquarium in the laboratory or work room. At present, only the ladies are furnished with separate rooms. A few of the gentlemen are put two in a room, while some ten of us occupy a large dormitory. The aquariums are not yet ready for use, so we are deprived of that facility for studying the habits of marine animals. This is in part supplied by the excursions which are daily made to the shores of this and adjoining islands, where the animals are studied in their natural habitations. These are also carefully studied by means of dissections, which are a part of the regular daily work of all students. Dr. Wilder, of Cornell University, has charge of the dissecting room, and all have the benefit of his knowledge and experience. The yacht "Sprite," furnishes us with additional means of comparing the various forms of ocean life, by daily dredging excursions into deeper waters than those immediately surrounding the island. Prof. Agassiz has given us a course of lectures on glaciers, and also upon embryology, and has commenced a course upon the anatomy of vertebrates, which he illustrated by dissecting a dog in presence of the class. Dr. Packard, of Salem, has lectured upon the lower forms of crustaceans and expects to continue through the class of articulates. Prof. Guyot has just finished a very interesting course of six lectures upon his favorite subject, physical geography. Dr. Brewer, is now delivering a course upon ornithology. Prof. Bicknell is giving practical instruction in the use of the microscope, of which the school furnishes a good supply.

From these statements, it will readily appear that our opportunities for improvement are excellent. And it can be said that all are endeavoring to improve them. Probably but few institutions can boast of a more enthusiastic company of students. They come from nearly every section of the Union: one from Colorado, three from Missouri,

two from Illinois ; three normal schools and eight or ten colleges are represented. The school will probably close about the first of September, as teachers and pupils must leave for their schools by that time.

E. A. GASTMAN.

PENIKESSE ISLAND, Aug. 7, 1873.

EDITORS' DEPARTMENT.

A correspondent of the *New York Herald* writes from Montreal that the Canadian government has under consideration a plan submitted by Mr. Sanford Fleming, for shortening the journey from America to England. The plan is to continue the Canadian railroads to Shippegan on the Gulf St. Lawrence, thence by steamer to St. Georgis in Newfoundland, then by rail to St. John's, and thence by ocean steamer 1640 miles to Valentia, in Ireland, thence by rail and steamer to London. It is calculated that by this route the journey can be made from New York to London in seven days and three hours. Sir Hugh Allan suggests that the railroads be continued to Gaspé's Point just south of the mouth of the St. Lawrence, and that the journey thence to Liverpool be made by ocean steamer. He argues that by this route the whole journey will occupy but six days and twenty hours. Either route proposed would doubtless save much time as compared with the long ocean voyage from New York to Liverpool. But the saving of time is by no means all; the journey along the Atlantic coast is by far the most dangerous part of the whole voyage from New York to Europe; and by either of these plans that is obviated. It seems very desirable that some means should be devised by which the traveler to Europe who desires to do so, may begin his ocean voyage somewhere near the most eastern point of the continent.

From the meeting of the National Association, at Elmira, we present the following editorial correspondence:

EAST DOUGLAS, MASS., Aug. 12, 1873.

DEAR SCHOOLMASTER:

We were present during the last two days of the session of the National Teachers' Association, at Elmira. The meeting, this year, was considered very successful; the attendance was very large, and every State, except two or three was represented. It was truly a *National* gathering of representative educators. We think there was scarcely a failure in any department to carry out every thing promised

in the programme. The delightful weather and the kind hospitalities of the Elmira people, added no little to the pleasure of the occasion. The papers presented were able, the discussions were animated, and every moment of time was thoroughly occupied. One of the most noticeable papers was read by Dr. McCosh of Princeton College; it gave rise to a most lively discussion, in which Dr. McCosh, President Eliot of Harvard, Supt. Harris of St. Louis and others took a prominent part. The Normal Department was very fully represented, both from the East and the West. There were comparatively few present from the great cities. Superintendents Harris, Hancock, Rickoff, Bulkley and Shortridge attended; but only a very few of the teachers from the cities appeared. Not a single teacher from Chicago was there, and we think there were but four from Illinois, all told. Among them was S. H. White of Peoria, who was elected President for the ensuing year. The Southern States were well represented; and the educational affairs of that section received a large share of attention. Two of the most interesting speeches were made by Supts. Gibbs of Florida, and Brown of Louisiana, both colored men. On the whole, the meeting was regarded as the most successful that the Associations have ever held.

Our journey was very pleasant, coming by way of Chicago, Detroit, Suspension Bridge and New York; the sail across Long Island Sound, in one of the fine steamers of the Norwich Line, was the most enjoyable part. In the cars, we found comfortable weather, no crowds, and but little dust. We arrived here on Saturday morning; where, among hills, huckleberry bushes, and fish-ponds, we expect a few days of rest. More hereafter.

E. C. HEWETT.

For *bat* in Miss West's article in our Aug. number read *rat*. This explanation is necessary, not for the information of the reader, but for the reputation of our esteemed contributor. The Cheiroptera have not yet joined the forces of the Rodentia.

The condition of the political world in our State, is best expressed by the word mixed. No general election being at hand, only county offices to be filled, the contest assumes quite different forms, even in contiguous counties. In some counties the farmers, in common with every body else, being opposed to monopoly and unjust discrimination, have deemed it necessary to organize a third party, distinct and separate from the two old parties: in other counties a general meeting of the farmers has failed to approve of the effort to organize *de novo*. The press is filled with "letters," "arguments," and "reasons," *pro* and *con*. Many of these documents are from honest, faithful men, who believe what they write, while others are from unprincipled demagogues. La Salle and McLean, two of our largest counties, have taken opposite

action in this matter. The former resolves to make no break from party, while the latter have held their convention and made a separate farmers' ticket. We can see a danger in this, that while this movement is intended by its upright supporters to war against class legislation, it is possible for them to work for a new and equally disastrous legislation discriminating in favor of their own vocation.

Agitation, however, is healthy, and no fears need be as to the ultimate result. The remedy is yet a long way off. The following dispatch taken from the *Inter-Ocean*, shows us a light ahead: the fitful uprisings throughout the country of mechanics and laborers as well as the farmers' movement, have each and all cause for some action; but whether those at present adopted are the best is questionable.

"Edward Young, Chief of the Bureau of Statistics, has addressed a letter to the Consuls of the United States in Europe, requesting them to furnish such information as they can gather as to the average rate of wages received by mechanics and others; prices at retail of the principal articles of subsistence, cost of house rent, and such other statistics of labor as can be procured. In regard to large manufactories, they are requested to give the average weekly wages paid for each kind of labor and to each employed therein; also, in detail the weekly expenditures of mechanics and other workmen, and to gather such facts in regard to health, comfort, education and morals as can be readily obtained. Mr. Young proposes to submit to Congress next winter, a report on the cost and condition of labor in Europe, as compared with the United States."

A State Senator from one of the most flourishing and best school counties in the State, at a recent Republican primary election in his own township, it is said, caused the delegates to be sent to the convention instructed to vote for a person for County Superintendent who had been dismissed from a school near his own home, within a year, for incompetency. How is this for intelligent school legislation! Will the people of that county return this man to the Senate? It has been further asserted of this Senator that his object in endeavoring to elect an incompetent person to the office, was to make the office "odious."

We are pleased to publish the article on valedictories, as representing the opinion of its author, and therefore of a class of teachers. We do not agree with its sentiments. We understand rewards in school to be awarded for *results*, whether given by nature or gained by application. When the record shows a pupil to be of the highest standing in scholarship in the class, it means that that pupil has upon daily examination by the teacher, proved himself to be the most proficient in the work. Because exceptional cases occur, arising from mistaken judgment or wickedness on the part of the teacher, the system of making awards is not rotten.

We realize the value of the objections presented in the paper; we have realized them many years; but what can replace the system? A gradation in ability and proficiency of pupils exists; they know it, the teacher knows it, why make an effort to conceal the truth.

We give with this issue a letter from Mr. Gastman, at Penikese Island. Prof. Hewett who is now in Massachusetts, will also take occasion to visit the Anderson School of Natural History, and be able to give us a full account.

[The following letter gives one view of the County Superintendency question, therefore we are pleased to publish it; we desire agitation.]

DANVILLE, ILL., August 7, 1873.

MESSRS. SCHOOLMASTER.—In speaking of the office of County Superintendent, my worthy friend, I am sorry you arrived so soon at the desperate conclusion, to say on the 274th page of the current volume, that you are "An advocate for the abolishment of this office." I take a different view of this matter. The office, a very important one, has been most unworthily filled in the greatest number of counties. The Legislature, when asked to raise the salary, did so, but that was not sufficient to bring efficient men into the office in many of the counties, till the Legislature last year, gave us an authoritative warning of what we may expect, not only as to this office, but every other thing relating to schools; what proves itself not worth the cost must be cut off. I think that your remedy is a little too heroic; it seems like killing the sick man. No, don't do it yet; but as we read, Luke 13—8, 9, of the fig tree, let the friends of education arouse to the work of the gardener. Charity prompts me to attribute the most unworthy method in which this office has been attempted to be filled, to ignorance, pure ignorance. Our educational journals have said very little about the duties and methods of making this office popular and efficient. Now Messrs. SCHOOLMASTER who shall have the honor of being the gardener, to dig about this office, that it may no longer encumber the ground.

Where is the annual meeting of the Superintendents, and what has become of the State Teachers' Institute? are they dead? I am afraid that there there is a reaction in educational matters in Illinois. I have been writing a little on this subject for one of our county papers, but I suppose it has not reached the eyes of my esteemed friend, the SCHOOLMASTER yet.

Yours truly,

M. M. WOODWARD.

SOLUTION TO ALGEBRAIC PROBLEM IN NUMBER 59 OF THE SCHOOLMASTER.

1. Let h = hypotenuse, b = base, and p = perpendicular of a plane right triangle. Then, from the well-known relations of the three sides, we have $h^2 = b^2 + p^2$ or $h^2 - b^2 = p^2$; that is, $(h + b)(h - b) = p^2$. (a).

2. But, both the sum and the difference of the hypotenuse and one of the legs of any right, rectilinear triangle are squares; and the product of said sum and difference is equal to the square of the other leg. Hence we may take $h + b = m^2$, and $h - b = n^2$; from these two equations, we have $h = \frac{1}{2}(m^2 + n^2)$, and $b = \frac{1}{2}(m^2 - n^2)$. Squaring each of the last two equations, and taking the difference of the results, we find $h^2 - b^2 = m^2 n^2$; hence, $p = m n$, because $h^2 - b^2 = p^2$.

3. If m and n be positive whole numbers, m being greater than n , then h , p , and b , will be positive whole numbers.

4. If we multiply the values of h , b , and p , by 2, we have

$m^2 + n^2$, $m^2 - n^2$, and $2 m n$. (A.) Here m and n may be any positive whole numbers, m being greater than n . If the assumption for either m or n be *even*, and the other *odd*, the values of b and p , as found by these two sets of formulas will interchange.

5. *Otherwise* put $h + b = p \frac{n}{m} (1)$, and $h - b = p \frac{m}{n} (2)$; then $(1) + (2)$ gives $h (2 m n) = p (m^2 + n^2)$. (3) and $(1) - (2)$ gives $b (2 m n) = p (m^2 - n^2)$. (4) .

Changing (3) and (4) to proportions, we have

$$2 m n : p :: m^2 + n^2 : h. (5) \text{ and}$$

$$2 m n : p :: m^2 - n^2 : b, (6). \text{ Whence } m^2 + n^2 \text{ and}$$

$m^2 - n^2$ must represent respectively the hypotenuse and base of a right triangle.

From (3) and (4) we also obtain

$$2 m n : m^2 + n^2 :: p : h (7), \text{ and}$$

$$2 m n : m^2 - n^2 :: p : b (8). \text{ From either (7) or (8),}$$

$2 m n$ must represent the perpendicular.

6. *Again.* Multiplying (a) by m , we may have $p (m p) = (h + b) m (h - b)$; whence, assuming $m p = h + b$, and $p = h - b$, we shall have $h + b = m^2 (h - b)$, therefore $(m^2 + 1) b = (m^2 - 1) h = (m^2 - 1) (m p - b) = (m^2 - 1) m p - (m^2 - 1) b$. Therefore $2 m^2 b = (m^2 - 1) m p$, and $p = \frac{2 m b}{m^2 - 1}$. To obtain whole numbers, let $b = m^2 - 1$; then will $h = m^2 + 1$, $b = m^2 - 1$, and $p = 2 m$. In this set, m may be any number greater than one.

7. *Again:* Assume $h = b + q$; then will $b^2 + p^2 = (b + q)^2 = b^2 + 2 b q + q^2$, whence $b = \frac{p^2 - q^2}{2q}$. Now, we may take any numbers we choose for p and q , so that $p^2 - q^2$ shall be divisible by $2 q$; this will always be the case when $q = 1$, and p is any *odd* number.

If we write 1 for q , we shall obtain $p^2 + 1$, $p^2 - 1$, and $2 p$, for another set of formulas, having the same *form* as the preceding; in these, p may be any positive number greater than one.

8. If in formulas (A), we put $p + q$ for m , and q for n , we obtain $h = p^2 + 2 p q + 2 q^2$, $b = p^2 + 2 p q$ and $p = 2 q^2 + 2 p q$, p and q being any positive numbers. It is obvious that a great variety of formulas may be had by varying the assumptions for m and n .

Pythagoras, born about 600 B. C., discovered the formulas $\frac{1}{2} (m^2 + 1)$, $\frac{1}{2} (m^2 - 1)$, m . These are the same as the first set found above, when $n = 1$. So pleased was he when he discovered that $h^2 = p^2 + b^2$ that he sacrificed one hundred oxen (hecatomb) to the muses, in gratitude.

J. M.

DE KALB, ILL.

[Those of our readers who are fond of algebraic work will read

our correspondent's article with much pleasure. Several of the manipulations strike us as curious and ingenious. We are a little sorry that some propositions, and some changes are not explained a little more fully, as we know that many could follow all the steps, with a little explanation; but they will not be able to understand everything otherwise. The proposition enunciated in paragraph 2 is *one* of the things to which we refer.—Ed. SCHOOLMASTER.]

EDUCATIONAL INTELLIGENCE.

ILLINOIS:—

State Board of Education.—The proceedings of the State Board of Education for the regular session, held June 25th, are before us. Among the resolutions passed, we give the following, as in part indicative of business the transacted.

Mr. Gastman offered the following resolution, which was adopted:

Resolved, That the Secretary be instructed to inform the printer that the Proceedings of the Board must be printed within one month after any stated meeting.

Mr. Wells offered the following:

The Curator of the Museum is hereby authorized to arrange such duplicate specimens as he may think advisable, and loan the same to county superintendents, to be used by them at teachers' institutes and drills; said superintendents to be held responsible for the safe return of the same, and to pay all expenses of freight and expressage.

The resolution was adopted; the vote being taken by ayes and noes.

On motion of Mr. Worthington, the following resolution was adopted:

Resolved, That the committee on Teachers be requested to take into consideration the subject of securing a more thorough superintendence of the pupil teachers in their work, by employing a teacher especially for this purpose, to act under the direction of President Edwards, and that the committee report at the next stated meeting of this Board.

Mr. Gastman offered the following resolution, which, after discussion, was adopted:

Resolved, That a special committee of three be appointed, whose duty it shall be to visit the school from time to time, and remain long enough to know the actual condition the several departments of the school, and report at the regular meetings of this Board.

Messrs. Gastman, Wells and Roots were appointed by the President of the Board as the special committee required by the foregoing resolution.

Iroquois County.—Dr. L. T. Hewins, a widely-known physician, an old resident of Loda, and county superintendent of schools for Iroquois county, was buried at Loda, July 28th, under the direction of Sir Knights from Urbana, Champaign, Paxton, and other places. He died July 26th, after a long illness. He is very widely mourned, and his funeral was attended by a very large concourse of people. He leaves a family and some property, though, unfortunately, he cancelled his life policy in the *Ætna* during the year.

Perry County.—A meeting of the County Institute, will commence in DuQuoin, on Monday the 18th of August, and close on the 29th. The veteran County Superintendent of Perry, than whom none is better or more favorably known throughout the entire State, seems determined to retire from the office at the expiration of the present term. The people of his county have succeeded in gaining from him the following letter. It is worth reading, as being the expression of one who has probably fought more battles for the cause of free schools in Illinois, than any other man now left in the ranks.

OFFICE SUP'T PUBLIC SCHOOLS, PERRY COUNTY, }
TAMAROA, ILL., July 1st. }

Editor DuQuoin Tribune:—I have been solicited by many friends in this county, to be a candidate for re-election to the office which I now hold. While thankful for their appreciation of my labors, I have uniformly replied that I should not hold the office after next November. Nothing but the deep interest which I feel in our schools and the refusal of every other person in the county who is competent to discharge its duties, would have induced me to continue to endeavor to discharge the duties devolving upon the C. S. beyond my present term, if the law had remained as it was when I took the office. Months before the change of the law was agitated in the 27th General Assembly, I informed Capt. McNeil, L. S. Norton, Capt. Hand and some others whom I considered well qualified for the office, that if one of them would consent to undertake the duties of the office, I should be very glad not to continue in it. The people of the county have shown me so much kindness and so earnestly aided me, and the excellent corps of teachers of which Perry is justly proud, in every effort for the improvement of the schools, that I did not like to say that I *would not* under any circumstances continue in the office. But the Legislature has settled the matter. The State Superintendent in his last Biennial Report, after summing up the provisions of the law which will govern the office of C. S. after next November, says:

"By these several provisions, when they take effect, county supervision of schools will be virtually abolished. The office will nominally remain, with a few comparatively unimportant financial and other routine business duties; but county supervision and inspection of *schools*—those *educational* services which give to the office its chief importance and value, and which have been so beneficial in the past—will practically cease, and in this respect the free school system will be shorn of one of its best instrumentalities, and remanded to the condition it was in twelve years ago. under the old "school commissioners," who, strictly speaking, had no *educational* work to perform, and performed none.

And upon a subsequent page of the same report he adds :

"That if the provision of the new law goes into effect, unchanged, county school supervision will cease and the office itself of county superintendent of schools, will be merely a name—a misnomer—and might as well be abolished altogether. Every capable and accomplished superintendent will be compelled to abandon the work and to engage in other pursuits, as several have already done, in anticipation of the probable future, and none can or will be found to supply their places.

The offices, in nearly every county, will fall into the hands of persons who will seek it as a mere temporary means of subsistence till other employment offers, or into the hands of young lawyers, physicians, clergymen and others, who will use it as a

secondary adjunct to their regular pursuits, without even pretending to do much more than to handle the funds, keep the accounts, and receive their commission."

That this is a correct statement of the effect of the law, no one who understands the law will doubt. But I have hope that a better fate awaits Perry, since you have told us that one of her most competent daughters is spoken of for the office.

I send you this because you say in the *Tribune* of last week that "some are inquiring," &c., and that I am "of age" and can answer for myself. I answer, No.

B. G. ROOTS.

Evanston.—*Appointment of Teachers.*—The Board of Education, at their last meeting, made the following appointments of superintendent and teachers for the coming year in the public school :

Superintendent—O. E. Haven ; salary, \$1,800.

Grammar Department—Room No. 7, Minnie Bradshaw ; salary, \$750. Room No. 6, Mary N. Ludlam ; salary, \$750.

Intermediate Department—Room No. 4, no appointment. Room No. 3, Lillie Stephenson ; salary, \$700.

Primary—Room No. 21, Jessie Gunn ; salary, \$600 ; Room No. 1, Miss Irwin ; salary, \$650.

This leaves two vacancies, one in room No. 4, of the primary department, formerly filled by Miss Haskins, who is employed in Dearborn Seminary, Chicago, for next year, and the primary school on Hinman avenue and Dempster street.

Logan County.—Mr. L. T. Regan the present incumbent of the county superintendent's office, has been selected by the board of school directors of Lincoln, as superintendent of our city schools. The selection so far as we have learned, gives entire satisfaction.

Pike County.—We are pleased to hear that the Normal School of Pittsfield, is succeeding admirably. Superintendent Dewell has been sick one week but is convalescent and will be able to resume his duties in the school. Profs. Dobbin and Corsbie are masters of the situation, and their classes are doing thorough work in the sciences.

McLean County.—A three week's institute was held at the high school building, commencing July 28th. The exercises took the form of daily drill in each of the four branches, under direction of Mr. John Hull, the county superintendent. The institute numbering over two hundred, was divided into two sections ; one made up of beginners, the other of those who had already given some attention to the subjects. Physiology was conducted by Dr. Marsh, late principal of Bloomington high-school, now practicing medicine in that city ; Botany, by Prof. DeMotte, vice president of the Illinois Wesleyan University ; Zoology, by Aaron Gove ; Natural Philosophy, by the county superintendent. Each teacher devoted his entire energy to but one branch daily, conducting two recitations. On Friday evening of the second week, the institute met by invitation for a sociable, at the residence of Mr. Hull. The house and grounds were crowded with friends, and a pleasing episode occurred by the presentation of a cane to Mr. Hull, by his professional friends.

McLean county teachers are second as a class to none in the State. Much of the efficiency of the schools is due to the efforts of the superintendent. As an evidence that

his ability and integrity are appreciated we notice that at the recent county Republican nominating convention he was unanimously re-nominated by acclamation. This is no petty compliment coming as it does from so intelligent a body of men as are the republicans of McLean county, one that has next to Cook, the greatest number of school districts and teachers in the State.

Champaign County.—The Champaign county Normal School, held a three week's session at Urbana, commencing Aug. 4th. The programme and superintendence was in the hands of Mr. T. R. Leal, the county superintendent, now in that office for the seventeenth year. For all these years Mr. Leal has been the untiring head of the school system of Champaign county, organizing the first institute ever held in the county, and absent from but one during the time. That the schools believe in him is attested by the fact that the roll at this institute exceeded two hundred names.

Prof. Burrill, conducted the Botany work during the first week, after which time Mr. Hays, a graduate of the University in class of '73, supplemented his work. Mr. Hays is new in the field as an institute worker, but gave ample evidence at Urbana, of his ability to instruct in the science of Botany, to which he is giving special attention. Mr. Hays is the florist of the Industrial University.

Prof. Taft, the Professor of Geology, gave instruction in Arithmetic, Physiology, and Natural Philosophy. Prof. Taft has an inimitable way of lecturing, whereby he accomplishes much, and at the same time keeps his class in the best humor, a fine talker, and scholar, carefully preparing whatever he undertakes for class work; his institute work is very successful. Aaron Gove gave instruction in Reading, Grammar and Zoology.

The Farmers convention was held at Urbana, during the institute. A candidate other than Mr. Leal, was nominated for county superintendent. Should he be elected, the people have only to pray that he will be as efficient as his predecessor.

Peoria County—From the report of Mr. S. H. White, principal of the county Normal school, we make the following extracts as showing somewhat the benefits of the institution to the county.

The Influence of the School.—Its number of representatives among the teachers of the country is constantly increasing.

By reference to the records of the county superintendent, it appears that in the year 1870, fourteen per cent. of those receiving certificates from that office had been pupils in the school. For the year 1871, the corresponding number was twenty-two per cent., while for 1872 it was fifty per cent. Since the first of September last, about ninety of the pupils of the school have been engaged in teaching in the public schools in the county.

That all these have achieved the highest degree of success is not claimed. Of a similar number engaged in any other calling, even though full preparation has been made for it, there are always some who are considered failures. In this regard, the work of teaching can never hope to be an exception to the general rule. But that their work has tended to raise the excellence of the schools of the county, is shown by various facts. First. There is greater permanence of teachers now than formerly, and permanence is considered one of the best possible evidences of satisfactory work in any department of labor. Where it was the rule only a few years since to employ one teacher for the winter and another for the summer school, it is now quite common for teachers

in the country schools to be employed by the year, while in some instances they are retained continually for two or three years.

2d. Teaching is becoming more and more a distinct business for which those engage in it make a special preparation. In consequence of this application on the part of teachers, and a resulting improvement in their abilities, the work of instruction in the public schools of the county, though not diminishing in the aggregate, is performed by a continually diminishing number of workmen. For saying this, we have the same authority as before. During the year 1869, the number receiving certificates from the county superintendent was 222. During the year 1872, notwithstanding the unusually large number receiving certificates immediately before the present school law went into effect, the number was only 208. During the years previous to 1872, the average number of certificates granted in the month of June, was two. In the year 1872 the number was for the same month, fifty-four. Make the number the same in the latter year as in the three previous years and the total number receiving certificates will be reduced from 203 to 151, a number nearly one-third less than that for 1869. This showing is evidence of a growing satisfaction of the people with their teachers.

Another evidence of the same disposition on the part of teachers appears in the records of the school, from which it is seen that some of its pupils return to their studies even a third and fourth time, after absence for the purpose of work or teaching.

This state of things seems to me more conducive to an increased efficiency of instruction in our public schools than any other agency could be. If much study and thought are necessary to make a lawyer or physician, if they tend to produce more skilled engineers or mechanics; if they are calculated to make more successful farmers, a proposition which will be denied by none, it is difficult to perceive why similar results will not follow from the same course with reference to teachers. If rightly viewed, their work is quite as complex and important in its results as that of any of these.

3d. A third result of the school is a growing acquaintance among the teachers of the county, a greater interest is felt in each other's success, and a greater disposition to profit by each other's experience. The meetings of teachers in different parts of the county are more largely attended and there is greater freedom in the expression of opinion upon subjects connected with their work.

Management.—In its internal workings the school has been conducted upon the same general plan as heretofore. At every step in their studies the pupils are reminded of the necessity of working with an expectation to teach the same branches, continually in view. To this ultimate end the instruction is directed. When the proper time comes each one is introduced to the actual work of instruction and school management in the training room. The aim is to do careful, substantial work everywhere, to impress the pupils with such regard for genuine industry and honest labor, that in their school rooms their examples as well as their precepts shall teach the important lessons of conscientious regard for duty, the right and good morals.

Galesburg.—Below find extracts from the annual report of J. B. Roberts, Superintendent of Schools:

The schools are lacking in some of the appliances by which the teaching might be made more effective. The rooms are not all supplied with dictionaries. There should be at least one dictionary in each room besides those which the pupils are expected to

furnish for themselves. Four or five sets of natural history charts would be of great value in the oral work. A few numeral frames are needed, and some philosophical apparatus for the higher grades.

To purchase all these articles which are very desirable and which will most certainly increase the efficiency of the schools would require about \$300, a sum which will not seem so large when it is considered that the benefits of it are to be shared among more than two thousand pupils.

The Board holds regular monthly meetings on the evening of the second Monday of each month at the office of the Board in the High-School building.

The Superintendent may be found in his office in the High-School building every school day between half past eight and nine a. m., and also between the hours of three and four p. m. He desires parents to consult with him freely, and to make known to him their complaints, if they have any. Pupils are admitted to school only on Monday mornings of each week, after the first three days of each term.

All new pupils, except new beginners, must present themselves to the Superintendent at his office for classification before they can be admitted to any school.

When pupils have become members of a school, it is, of course, expected that they will attend punctually and regularly, unless detained by sickness or by some unavoidable and unforeseen occurrence.

Parents are requested to inform teachers, either in person or by written note, of the reasons for every irregularity in attendance.

Pupils can in no case be excused during school hours for music or any other outside lesson, except by permission of the Superintendent. When such arrangements are to be made, parents are requested to call in person.

There are some matters connected with the course of study and the discipline of the schools to which I should be glad to call the attention of the public, if the limits of this report would allow.

I can say only that we have made an effort to teach the elements of drawing, and with an encouraging degree of success. I regard it as pre-eminently a practical art. It is certainly one which is commanding more and more attention among the best educators of the country. The Legislature of Massachusetts, has introduced the study by law into every public school of the commonwealth, not as an ornamental, but as a practical branch with reference to engineering, mechanics and architecture.

I venture also once more to call the attention of the Board to the subject of vocal music.

I am firmly and unalterably of the opinion that every child in our schools should have as faithful and systematic instruction in the elements of vocal music as in arithmetic, and I know that such instruction, if of the proper kind, would be practically beneficial to a larger percentage of the pupils than arithmetic or geography.

This is no longer a matter upon which to theorize.

The proofs are at hand for any one who is in doubt in regard to the matter. I speak thus confidently, for I have investigated these proofs personally, and have seen the results where any of you may see them if you wish.

In urging this matter, I am aware that it involves a slight additional expense, but I take it that you do not wish me to tell you how cheaply these schools can be run, but how efficient for good they can be made to the population at large.

Indeed I consider that I am working in the interest of economy if I can secure 20 per cent. better schools with but 10 per cent. additional cost.

Putnam County.—The teachers of this county held a Normal Institute of two weeks, closing on the 18th of July. Between fifty and sixty teachers were in attendance. Several were present from Marshall County. The attendance was very constant and regular. E. C. Hewett, of Normal, conducted the exercises, all of which took the form of class drills. About half the time was given to the "new" studies, Natural Philosophy receiving the largest share.

A public lecture was given at Hennepin on Thursday evening of the first week, and one at Granville on Wednesday of the second week. There was a good audience at both places. The County Superintendent, A. W. Durlay, will not be a candidate for re-election. The present prospect is that Miss Harriet A. Fyffe, of Magnolia, will be the candidate, and that she will be elected. She is a graduate of the Normal University. The county contains but thirty-five school houses, but they are generally in good condition, and the people sustain and appreciate good schools.

Ogle County.—Over one hundred members were in attendance at the county drill held at Oregon, under the superintendence of the county superintendent. Exercises were conducted by J. M. Piper, E. Brown, M. L. Seymour, P. R. Walker, J. H. Freeman, N. C. Dougherty, Frank Hall, Geo. Blount, and the superintendent. Closed Sept. 5th.

Montgomery County.—A four weeks drill for the teachers of this county closed at Litchfield, Aug. 22. The school was conducted by the Co. Supt., assisted by Profs. J. W. Cook and Dr. J. A. Sewall, of the State Normal School. Notwithstanding the heated weather, and the extra expense, the teachers of Montgomery county turned out in large numbers. The work was said to be very satisfactory.

An extra of the *Easton Free Press* gives a very full account of the closing week of Lafayette College. From it we learn that the college has a new scientific building nearly completed. It will cost \$20,000, and is the gift of Mr. Pardee. A new chapel, costing \$30,000, has been completed this year. We judge that the college is in a very flourishing condition, which will be cause for joy to all lovers of sound learning.

From the report of Col. Eaton, commissioner of education, we gather the following facts:

While Mass., for schools, spent \$20.05 *per capita* of population of legal school age, Illinois spent \$8.52. Iowa, Penn., N. J., Neb., Conn., Cal., and Nevada, each exceeded our own State in the expense on this basis.

The average monthly wages paid to public-school teachers in Mass., is male, \$85.09, female, \$32.39. In Illinois, male \$50.00, female, \$39.00. There are 101 normal schools in the country of which Illinois reports nine (?) Ohio, eleven (!) and Mass. seven.

In the table giving the number of museums of natural history, our State is represented as having *none*.

The subject of the education of the people is put by Col. Eaton, in the following words:

It should be observed also that those who are interested in this examination of the entire relations of the questions of education to the public welfare can not be limited to those classes of persons who are chosen to make laws, either in the national, State, or municipal councils, or who are selected to administer the laws or to adjudicate cases under them. These questions have a direct interest for every citizen, whatever his rank or position or occupation, and he has a direct responsibility in reference to their solution. Every dollar of property in a city or State, or in the nation, is interested in the burdens to be imposed upon it by way of taxation for the support of pauperism, for the punishment of crime, and for the correction of the manifold evils which are the sources of these burdens. Every dollar of value, therefore, is interested in the education of the people, as the great and almost the only process of prevention in the power of civil government to employ, to reduce the expenses resulting from crime and pauperism, as well as other and numerous evils, which are avoided or diminished by the universal application of intelligence and virtue on the part of our citizens. It should be recognized as a fact, therefore, that every citizen, whether as an owner of property, or solely on account of his rights and immunities as a citizen, is deeply concerned in striking the balance between the benefits of education and the evils of ignorance and vice in his city, in his State, in the nation.

And when we have a record of these considerations, which should command the profoundest attention of the statesman and the patriot, we are dealing with the same principles of political economy which must be apprehended by the humblest citizen as the guide of his conduct.

Each is alike interested in the question whether the nation is growing better or worse, whether property is increasing or diminishing, whether life is shorter or longer, and whether he himself is contributing to the one result or the other. And when this circle of inquiries has been traversed, should it be found that all questions of method and forms of government, of expediency in political economy, and all solutions of problems of civil government, come together and are determined by the methods adopted in the instruction and training of the young, and the extent and faithfulness of their application, of what supreme and primary importance will the universal voice of mankind pronounce all inquiries into educational statistics?

Moreover, as the American citizen contemplates the movements among the nations of the earth, and recognizes the changes that are entering into the conditions which determine national progress, he cannot fail to rejoice in seeing the greater and greater extent to which the fundamental ideas of his own government are having weight among the peoples of the earth. He sees all the oppressions of tyranny and caste yielding to the alambic of enlightened reason; he sees imperial, royal, and aristocratic councils stooping to consider the quality of men as a factor in the problems of political economy; he observes in all civilized countries mere physical force going down before brain power and moral power; that reason and truth and right are showing their influence in proportion as light is shed among communities and nations; that changes in science and intelligence are followed by corresponding changes, even in the appeal to arms. The warrior, in measuring his foe, the merchant in trusting his correspondent, the mechanic or artist in looking at his competitor, and the capitalist in considering the value of the laborer, must estimate the other's intelligence and training.

Unfortunately, we have no tests entirely satisfactory; those of reading, writing, or

both, only having so far been generally applied. But all facts showing the opportunities for education, and the extent to which they are improved, have their value; and for the United States, year by year, the reports of this office are reaching more nearly to satisfactory results. Slowly, according to the inadequate means furnished us, and impeded by the chaotic condition of statistics and reports out of which correct conclusions are to be reached, we are coming into possession of that knowledge which may be a fair test of our capacity as a nation, and the methods by which our excellence and greatness may be increased and the welfare of our people promoted.

The Commissioner closes with a statement of the work accomplished by the Bureau and recommends an increase in the force of the office commensurate with the great increase in the work to be done; that \$10,000 copies of the Bureau's report, annually, on its completion, be put at the control of the Bureau for distribution among its correspondents and the educators of the country. The Commissioner repeats his recommendation that the whole or a portion of the net proceeds arising from the sale of public lands shall be set aside as a special fund, and its interest be divided annually, *pro rata*, between the people of the several States and Territories and the District of Columbia, under such provisions, in regard to amount, allotment, expenditure and supervision, as Congress, in its wisdom, may deem fit and proper.

THE PEABODY FUND.—The annual report of the general agent of the Peabody Fund, Dr. Barnas Sears, gives an encouraging review of the general condition of the public schools in the Southern States, and says the encouraging circumstances vastly predominate over the discouraging. There is one class of men, the report says, whose influence is to be dreaded, who do not profess to be unfriendly to common schools, but reluctantly consent to let the experiment be tried provided it be done cheaply, not considering, probably not caring, that such condition is fatal to success. The effect would be, and in more than one State, is to create a widespread dissatisfaction among the people, who, having paid their school tax, find that private schools have been broken up or reduced to weakness or inefficiency by the removal of so many pupils, and that for want of sufficient funds, no respectable public schools have taken their place. So far as the education of the children of the State generally is concerned, the two systems coexisting are chiefly efficient in weakening each other. Either, to be prosperous, requires all the money that is paid for both. Men will not be satisfied to be reduced to the necessity of setting up schools of their own, or of sending their children from home after having contributed their share to the public school fund. Such are the results of what people are pleased to call economy in the expenditures for public schools. The report goes on to refer to scheming legislators, and shows how the voice of the people has been frequently raised against them, insists that superintendents should not be frequently changed, and says we must wait a time for the results of the change from the private to the public system. Past prejudices are coming to be regarded as amiable weakness, and there are men enough in the Southern States who pronounce for abandoning the antiquated system of private schools and adopting the changes our present conditions render necessary. The following statistics are taken from the report:

Virginia.—Public schools in the State for the year ending Aug. 1, 1872, is 3,695, and the school population, 411,021 persons, of whom 247,002 are white. The amount appropriated was \$32,800.

North Carolina.—The condition of the public schools, and education generally, is far from satisfactory, owing to the alarming indifference on the subject among the common people and the want of union and party co-operation among public men. The amount appropriated was \$12,550.

South Carolina.—Few schools are reported. The legislature at its last session appropriated over \$300,000 for educational purposes. Not one dollar of the amount has been received from the Treasury, and the result has been that nearly all the public schools in the State have been closed. Amount paid out, \$1,500.

Georgia.—The effort thus far to establish a public school system has resulted in comparative failure. The fund contributed \$10,200 to twelve schools.

Florida.—Three-fourths of the youth of the State are yet unreached by the educational system, but the ratio is rapidly changing. The fund contributed \$8,000 in aid of fourteen schools.

Alabama.—Of a population of 1,000,000, 383,000 can neither read nor write. Of the voting population, there are 91,000 blacks and 17,000 whites who cannot read or write. The State funds paid \$606,617 during the year and the Peabody fund \$700 to five schools.

Mississippi.—There are 4,650 public schools, with an average attendance of 125,000, and 400 private schools, with 148,780 pupils enrolled. Expense of the common schools, \$1,136,988, and the Peabody fund contributed \$4,450 to aid of six schools.

Louisiana.—Seven thousand eight hundred and ninety dollars was contributed to aid the schools.

Texas.—In the unsettled state of school matters the trustees did not feel justified in making donations.

Arkansas.—The number of children of school age is 194,314; number of persons attending school, 32,863, teachers, 2,035; amount paid to teachers, \$355,625, and amount contributed from the Peabody fund, \$9,500.

Tennessee.—The number of children of the school age is about 400,000; school fund, \$2,512,500; amount available for schools, \$650,000, and the Peabody fund contributed, in aid of fifty-five schools, \$25,900.

West Virginia.—There are 3,000 schools in operation, run at an expense of \$750,000 annually, and \$90,000 in the graded and high schools. The Peabody fund contributes \$15,950. Total contributed to all the States, \$135,840.

PERSONAL —Shurtliff College, at the recent commencement, gave the degree of A. M. to J. P. SLADE, county superintendent of St. Clair county.

O. M. TUCKER remains at Lacon another year.

C. F. DIEHL will continue in his place at Hennepin the coming year.

JAMES P. SLADE has been made Superintendent of Schools in Belleville.

GEO. MASON, late principal of Pekin high-school, has become the principal of the high-school at Hannibal, Mo.

A. ANDREWS, goes to the public schools of Geneva Lake, Wis.

A. M. BROOKS, has been elected Superintendent of Schools at Springfield, Ill.

O. S. WESTCOTT, should be addressed hereafter at Chicago High School.

ILLINOIS NORMAL.

Through inadvertence, the Normal was neglected in our last number. We are the more sorry for this because that would have been the proper place to speak of the close of the term, and the exercises of commencement. At this late day that subject is too old for amplification. It is sufficient to say that the term closed successfully; the examinations were quite equal to the average, although the weather was intensely hot. On the last day of the term, Miss Osband received a fine ice-pitcher as a parting gift from the school. Commencement day was pleasant and somewhat cooler than a few of the previous days had been. The exercises were creditable to all concerned. The audience as usual filled the hall to repletion. On the platform were several members of the legislature, some of whom gave us words of greeting and cheer. After the commencement exercises, which occupied about five hours, the new graduates, members of the Faculty, invited guests, old students, and citizens, to the number of about four hundred, adjourned to the school-room hall to partake of the annual dinner. This was followed by toasts and speeches until about five o'clock, when the assembly broke up. There was no sociable in the evening.

The public exercises of the Alumni took place on the evening before commencement. They were opened by a sensible address from the President, Robert A. Childs, Esq., followed by a characteristic speech from O. F. McKim. This speech was exceedingly funny, but, along with the fun, were many *streaks* of excellent sense. The chief feature of the evening was the oration by Prof. Henry B. Norton, of Kansas. It was scholarly, eloquent, and very suggestive, holding the closest attention of the audience for about one hour. Prof. Norton's friends, and they are legion, will be glad to learn that he leaves his life among the Indians to resume his connection with the Normal school at Emporia. The exercises of the evening were interspersed with good music.

The Board of Education, at an adjourned meeting July 31st, awarded the contract for heating and ventilating the Normal building, to Mr. Ide, of Springfield, Illinois. Mr. Ide is the contractor for heating and ventilating the new State House; he will put a large force on the Normal job, and expects to complete it early in September. The Board granted President Edwards leave of absence for six months to recruit his health.

Since the term closed Normal is very quiet, as is usual in vacation. A few of the students are in town working in one capacity and another.

PRES. EDWARDS has been at home nearly all the time thus far; much of the time his health would not allow him to leave the house. He is better now.

PROF. HEWETT spent the first five weeks of vacation about home, and has now gone east with his family. During two weeks in July he conducted an Institute at Hennepin.

PROFS. SEWALL and COOK went east for three weeks at the beginning of vacation. They have been working in Institutes since their return.

PROF. METCALF went east early in vacation, and has not returned. He has been rusticated on the coast of Maine a part of the time. The latest reports are that his health is quite poor. Prof. Coy and family are spending August in Wisconsin.

PROFS. STETSON, McCORMICK, BAKER and FORBES have spent the vacation in Normal thus far.

The prospects of the opening on Sept. 8th, are that the school will be as usual full

to overflowing. Many of the students, who have been absent a year or more are about to return to complete their course. The building is undergoing a thorough overhauling, new boiler and a new system of ventilation is nearly ready for the opening of school.

The new hotel has been opened and is now in running order.

Students arriving in Normal by train can get whatever information necessary respecting board, rooms to rent, etc., by calling at the office of the Young Men's Christian Association, two doors north of the postoffice.

OFFICIAL REPORT OF PROCEEDINGS OF THE NORMAL ALUMNI ASSOCIATION,
PHILADELPHIAN HALL, June 25, 1873.

Meeting called to order at 3 o'clock, p. m. President in the chair.

The Secretary not being present, the minutes of the last meeting were not read.

The Treasurer then read his report, which was accepted. Moved and carried, that the chair appoint a Sec. pro. tem. President then reported \$20.50 expended in printing, sending same and Janitor's fee. He also reported in regard to arrangements made for dinner.

The association then ordered that the President be paid from the Treasury \$20.50.

Mr. Hull then suggested that the one dollar fee be called for from the members.

The Treasurer being obliged to leave, Miss Wakefield was appointed assistant treasurer.

Mr. McKim moved that a nominating committee be appointed. Said committee, consisting of one member from each class, was then appointed and instructed to report at the evening meeting.

Mr. Hull, after some remarks, moved that hereafter the Alumni have a dinner on the day of the business meeting, or have none at all.

Mr. Norton asked for the report of a committee. Mr. Burrill asked "what committee." Mr. Gove then stated that a notice was given in the *Pantagraph*, requesting all graduates of the University, in the vicinity of Bloomington and Normal, to meet at the Reception Room, June 19th, to see what might be done to make the Alumni meetings of greater interest—that at that meeting a committee, consisting of Harriett Dunn, May Pennell and Aaron Gove, was appointed to report at the coming business meeting of the Association. He then read this report, after which a lengthy discussion arose in regard to the suggestions therein made.

Mr. Hull here called for a vote on the motion in regard to the dinner. The motion was carried. Also, moved and carried, that the dinner be before the business meeting.

The Association then moved to consider, one by one, the suggestions in Mr. Gove's report. It was voted that a special committee be appointed to invite Gen. Hovey to be present at the meeting next year. On this committee were appointed, Messrs. Gove, Norton, Gastman, Hull, Mrs. Hull and Mrs. Strickler.

The constitution was then so amended as to admit of the election of a Corresponding Secretary, who shall be a resident of Bloomington or of Normal. Moved and carried that the Executive Committee consist of the President and the two Secretaries.

Moved to amend the constitution so as to admit of an additional fee of two dollars, to be paid in January of each year. After a lengthy discussion and numerous motions in regard to the *fund*, amount of fee, &c., &c., the question was laid upon the table for one year.

Mr. Norton moved, "That a special committee be appointed by the chair, whose duty it shall be to apportion among the Normal Alumni, upon a *per capita* basis, their respective proportion of a fund of one thousand dollars, to be paid in before the first of March, 1874, to be invested as a permanent fund for the benefit of the Normal Alumni, and to be used at their discretion." Carried. The chair appointed Gents. Capen, Cook and Gove.

On motion of Mr. Capen the Cor. Sec. was instructed to prepare a list of the members, giving a short account of their whereabouts, doings, and so forth, for the benefit of such as may be present at the next annual meeting.

Association adjourned until evening.

EVENING SESSION.—President in the Chair. Mr. Hull reported officers for the coming year. Report accepted. The President stated that on account of illness Miss Hurwood was unable to be present. The President's address was then given. An oration by O. F. McKim, of Decatur, followed, and a vocal duet, by Misses Ida Cook and Nannie Smith.

Mr. Henry B. Norton, of Emporia, Kansas, then delivered an address.

The President announced as officers for the ensuing year:—Pres. Henry B. Norton, Emporia, Kansas; Cor. Sec. Aaron Gove, Normal, Ill.; Rec. Sec. Wm. McCambridge, Bloomington, Ill.; Treas. E. A. Gastman, Decatur, Ill.

Adjourned.

R. A. CHILDS, Pres.

JENNIE P. CARTER,

Rec. Sec.

BOOK TABLE.

Xenophon's Anabasis. By ASAHEL C. KENDRICK, LL. D. SHELDON & Co., New York.

This work is published in the following forms: First, a complete edition of the *Anabasis* containing the entire seven books; Second, the first four books of the *Anabasis*; and Third, a complete vocabulary, with full and critical notes to the entire seven books. The last named is designed for use with any edition of the text, and while obviating the necessity of purchasing a lexicon for the study of this work, it also gives to the student the advantage of these valuable notes, by Prof. Kendrick.

The first two editions mentioned above contain, besides the text, Kiepert's map of the route of the ten thousand, elegantly engraved, an introduction which gives a clear historical sketch of the expedition, an itinerary giving dates, places and distances; a summary of a few special principles and points of Greek construction, grammatical and rhetorical, notes with references to the principal Greek grammars in common use, but chiefly to Hadley's and Bullion's, and a vocabulary. The editor has done his work with excellent judgment and with scholarly care. The notes are unsurpassed by those of any edition of the *Anabasis*, with which we are familiar. We have seen nothing so well calculated to lead the student to a just appreciation of the force and beauty not of this author only, but of the Greek language and literature, in general. The nice shades of meaning expressed in Greek by those little particles, for which it is often so difficult to find an adequate translation, and which are, therefore, often left untranslated,

are explained here with admirable skill. We have but one fault to find with these notes, and that is the scarcity of grammatical references. For the elementary work, which has to be done while passing through these first books of the *Anabasis*, a large increase in the number of references to the grammar would, we believe, be found highly advantageous.

The Greek text is good. We do not like the forms of some of the letters,—the Zeta, the Kappa, and the Xi, in particular,—but the type is large, unusually so for Greek text, and generally pleasing to the eye. We have observed one or two typographical errors which a future edition will doubtless correct.

This will doubtless take rank as one of the best of the many editions of this popular author.

Monroe's First Reader, by LEWIS B. MONROE. Philadelphia; COWPERTHWAIT & Co., 1873.

We are glad to welcome one more book of this series. We have had occasion to test one of the early books by class use, and were pleased with the results.

The opening sentence in this little first book is a volume: "A book is not the first thing to be put into a child's hands, even in teaching him to read."

The letter-press is beautiful. We have no occasion to retract any of the praises we have bestowed, heretofore, on Monroe's Readers, now that we have seen the first book.

We regard the series as one of the best in print.

A School Manual of English Etymology, by EPES SARGENT. Philadelphia, J. H. BUTLER & Co.

As far back as 1854, the old house of E. H. Butler & Co., issued from the press *Bailey's Scholars' Companion*, containing exercises in the orthography, derivation and classification of English words. For these twenty years, in hundreds of our best schools, this has been yearly in the hands of pupils. With the advantage of experience, the improved methods of teaching, and advanced scholarship, the same house, or its successor, presents a new work of the same character, arranged by Epes Sargent. The compilation could not have been placed in better hands. The study of etymology as urged by this work is one of the certain roads out of the ruts of English grammar teaching, in which we have been for half a century. The book contains 264 pp. The arrangement and classification is practical. We hail the advent of this book, especially because it gives one more incentive to the proper study of our language.

STEIGER'S GERMAN SERIES:—*Ahn's German Reading Charts*, *Ahn's First German Book*, *Ahn's Second German Book*, *Ahn's Rudiments of the German Language*, *Key to Ahn's Rudiments*; by DR. P. HENN. New York, E. STEIGER 1873.

The above constitute a set of books for the learner in the German Language. They are put in a convenient and sufficiently cheap form for the masses. The charts introduce German Script letters of *very large* size, showing their true formation—a quality that will be highly appreciated by those who have tried to write German from the ordinary printed script alphabet.

The first and second are as the names imply, intended for hand books for the pupil. The *Rudiments* is a combination of these two in one cover. With Ahn's system the public are quite familiar. It has received the approval of the public. These books present it with skill, both in matter and mechanism. Teachers of German will be glad to send for specimen copies for examination. For the self-learner these books are the best.

Tables of Latin Suffixes and a List of Prefixes, by AMOS N. CURRIER. ELDREDGE & BROTHER, Philadelphia.

This is a little book of thirty-five pages, intended by the author as an aid to the student in the study of Latin words. It supplies a deficiency often felt by teachers of elementary Latin, and it will, we believe, be found useful in giving a knowledge of the formation and derivation of words. The book will serve a good purpose if it succeeds in calling the attention of teachers and pupils to a kind of instruction that is too often neglected.

BOOKS AND PAMPHLETS RECEIVED.

Chapters on Intellectual Philosophy. Text Book on Intellectual Philosophy. By J. T. CHAMPLIN, D. D. WOOLWORTH, AINSWORTH & Co.

Philosophy of Rhetoric. By JOHN BASCOM. WOOLWORTH, AINSWORTH & Co.

A Lexicon to Xenophon's Anabasis. By ALPHEUS CROSBY. WOOLWORTH, AINSWORTH & Co.

Report of the Commissioner of Education. 1872.

Steele's New Chemistry. A. S. BARNES & Co.

Franklin Fifth Reader. Franklin First Reader, BREWER & TILESTON, Boston, 1873.

Rolph's System of Penmanship; six numbers and review; books for teachers' preparation. H. ROLPH, Chicago. Adams, Blackmer & Lyon, Pub. Co., 1873.

Catalogue and Circular, of Shelbyville Graded Schools. J. HOBBS, Superintendent.

PERIODICALS.

Lippincott's Magazine for September will be a strikingly attractive number. It will contain an unusually entertaining article on "English Court Festivities," by a writer who had the *entree* to the "diplomatic circle," and who has given a graphic description not only of the *levees* and "drawing-rooms" held by the Queen and the Prince of Wales, with the ceremonials and etiquette at such receptions, but also of the entertainments, balls, concerts, etc., at the royal palaces. A short article will be presented on "The Patrons of Husbandry," whose numbers are growing with prodigious rapidity, exciting general interest and a desire for information as to the aims of the order, the constitution of the "Grangers," etc. "The new Hyperion" is continued with increasing interest, which is not a little enhanced by the characteristic illustrations of Gustave Dore. The number will contain the concluding paper on "Fruits and Flowers of the Tropics," giving a striking and accurate description of the marvelous vegetation of Oriental countries; also a "Sketch of Eastern Travel," treating of China, with illustrations of the chief points of interest. Under the title of "A Lotus of the Nile" will appear a tragical love-story by Christian Reid, the popular author of "Valerie Aylmer." Mr. Black's charming novel, "A Prince-s of Thule," which is being received with universal favor, grows more absorbing as it progresses. "Colorado and the South Park" will be discussed in a timely and very agreeable traveling sketch by S. C. Clarke. Another part of Mrs. Hallowell's pleasing novelette, "On the Church Steps," which, by the way, is delightful summer reading, the scene being laid at Lenox, carries the reader further into a most interesting story.

"Our Home in the Tyrol," Miss Howitt's graphic description of life and scenes in the picturesque region of the Tyrol, is continued, with illustrations, and "How they Keep a Hotel in Turkey," by Edwin de Leon, gives a very entertaining picture of life and manners in the East, as observed in the native khans as well as at the great hotels in Constantinople and Cairo.

Several short Poems and a budget of piquant "Gossip" will complete a really interesting and attractive number of this popular Magazine. Yearly subscription, \$4 00.

ILLINOIS TEACHER, }
Volume XII.

THE

{ CHICAGO SCHOOLMASTER,
Volume VI.

ILLINOIS SCHOOLMASTER.

A JOURNAL OF EDUCATIONAL LITERATURE AND NEWS.

VOLUME VI.

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VENTILATION IN THE SCHOOL-ROOM.

On page 307 of Vol. IV., (Nov., 1871,) of the SCHOOLMASTER, is an article with the above caption, by E. A. Gastman. During the two years that have elapsed since that article was written, improvements have been made, based upon that which is the only positive teacher in this world—experience. And yet so much of truth is in that paper that we reproduce one paragraph:

“Can you afford to shut yourself, to say nothing of the pupils, in a room, and breathe the exhalations from twenty, thirty or sixty pairs of lungs, without even making the attempt to render the atmosphere as pure as possible? Your own health is too important to be sacrificed in that way. You are the guardian of the children placed under your instruction. You know what is said about a ‘sound mind in a sound body.’ All else that you can do for the little ones will not compensate for their destruction of health.”

Every teacher realizes the practical difficulties in the way of even common ventilation. The headaches with which one leaves the school-room at night are not confined to teachers. Pupils, especially delicate girls and boys, are daily similarly afflicted. As the term rolls on, parents, noticing the rapid enfeebling condition of their children, withdraw them from school, assigning as a reason that the studies are too severe for them to bear up under. The facts in the case are, in most instances, that the school-room is not supplied with pure air. Words fail to convey the abhorrence with which intelligent people view such a condition of affairs: and when it is considered that the remedy is so

simple, so cheap and so evidently at hand, the abhorrence changes to vexation, intolerance and disgust toward school teachers, toward school boards, and toward ourselves.

What can be done? The sashes cannot be lowered, for then all heat at once leaves the room, and it is the warmth that we seek. They cannot be raised, for the draught comes plump upon a child, and illness or even life-long disease or death ensues. This is no exaggeration. Many a pupil has been sent to a premature grave by the careless manipulation of window sashes. If then, we cannot use windows and doors for the ingress of the pure air, how shall it be obtained? It is understood that the teachers who read this, appreciate the value of pure air. Evidently the air must be introduced in some other way; and, more than that, it must be introduced of a comfortable temperature.

In large buildings, or small ones when convenient, the furnace can be used; but the fifteen thousand country school-houses in Illinois that cannot have furnaces! What shall be done with them? It is not important to inquire why they cannot have a furnace, whether finance or disposition prevent. The fact is, no furnace can be put into the school-house, and God and man will bless any invention that will keep the inhabitants of these buildings in a pure physical as well as moral atmosphere. Is there a stove in existence that will accomplish the desired result? Yes, one at least. It can be commended and recommended, not on theory but on experience. In Decatur, Illinois, several have been in use four years. In hundreds of wide-awake school districts they are now in use, so arranged that every foot of the room, except that upon which the heater stands, is available for use, warming all parts of the room to the same degree, and constantly pouring into the apartment volumes of pure air, taken from outside of the house. Its cost is within the reach of all—in truth, cheaper than common heaters, for one will last a longer time. It is likely that we may be doing the firm that manufacture these a service in thus noticing them. If so, we are glad of it; for in assisting them a little, we shall be assisting the cause of health much. We are glad to urge our friends to correspond with the Bloomington company as advertised on the second page of the *SCHOOLMASTER* advertiser, current number. If you have to make any new arrangement for heating, this fall, it is certain you will be helped by corresponding with them. Mr. Phillips, of this firm, has also com-

pleted a novel patent which he calls "The Fire on the Hearth," that is certainly something new under the sun. An open fire is pleasant to look upon, and for ventilation is pre-eminently good. But those of us who remember the old-fashioned fire-place, remember, too, that although pleasant to look upon, it warmed but one side of us at a time; and that some remote parts of the room were cold while a blazing fire roared on the hearth. By an ingenious arrangement, the invention of which we speak combines the principles of the school-room heater with those of the old-fashioned fire-place, so that every part of the room is made comfortable with warm, *pure* air, while at the same time the bright picture of the blazing fire is before one. For a country school-house we can think of nothing more pleasant and useful than this *Fire on the Hearth*. After all that can be said, one thing, and only one, is wanted. Any way, teachers, that you can attain that, will suffice. Air taken from the outer atmosphere directly into the school-room, of a sufficient degree of temperature to make the room comfortable is the *desideratum*.

I have said nothing of the *exhaust*. Little need be said. If a certain amount of warmed air is taken into a room, a certain amount of cold air must first be taken out. It is easier to coax than to drive it out.

SCHOOL SESSIONS.

I. In making our plans for school work, we ought specially to aim at that method which is best adapted to secure good health. Pupils, should, if possible, be kept in good physical and mental condition; when they are required to study, their bodies should not be exhausted by long confinement, nor their minds bewildered by prolonged application.

II. For persons under eighteen years of age, short alternate periods of rest and work are better than long and exhaustive periods of work, followed by long seasons of rest.

The above postulates are old and trite. They have been proclaimed in our neighborhood for a quarter of a century, and longer too. Everybody acknowledges the truth of them, and yet they are every day disregarded in the management of our public schools. In many of our high schools the hours of each working day at school have been put

into one session. Teachers come to the school house at eight or nine in the morning and leave at one or two in the afternoon; and all they have to do with pupils, in the way of direct personal influence, is brought within the limit of five consecutive hours.

By this means high-school education seems to be largely defeating its own ends, and introducing weakness and decay into the material it ostensibly aims to strengthen and refine.

Every teacher soon learns that there is a limit to the power of fixing the attention. The average of this limit can easily be ascertained. It is safe to say that three hours of close mental work is as much as men, on the average, are capable of; children and youth certainly cannot exceed that amount; anything beyond is a profitless weariness to flesh and spirit. This limit includes too much rather than too little. There are but few men in the world who can hold the attention of an audience of adults, two hours at one time. Gough can do it; but even with his action and elocution, men sometimes drop asleep before the end of the second hour. There are but few clergymen who can preach two sermons a day acceptably, if each is an hour long. Few men, even of those most devout, can apply themselves to one point resolutely enough to take spiritual instruction in instalments of more than one half-hour each. In ordinary Sunday services, the time is broken up into brief periods. There is first the morning service, from which the people depart to their homes, far and near, after remaining together not more than an hour and a half. Then the afternoon service the same. There is, besides, the evening meeting, and somewhere in the course of the day the Sabbath school. These exercises are divided at least into as many as three sessions. They often require three journeys, some of them quite as long as any that the youth of a town or a city take in going to the public school. Now why not unite all these exercises into one session, with a recess or two of ten or fifteen minutes? It would save much of the time now spent in going and coming. It would secure a good part of the day for unbroken rest, meditation or study. It would take no more time for all the exercises than is now supposed to be occupied in school study every day, and that, too, consecutive study, where there is but one session. The pupils in school do not all die at once under this plan. Their elders, with greater powers of endurance, ought to be able to bear it one day

in seven, if their children find the principle involved best for them on the remaining six days. On the Sabbath there is nothing like compulsory taxing of the mind. In many cases there is no taxing of it whatsoever; in some cases it is simply amused; and yet, in no case, would the plan I suggest be seriously thought of for a moment. Why, people on Sunday get so exhausted in an hour and a quarter spent in worshipping and receiving instruction that they are often quite prostrated; and as to the religious instructors, who prepare two lessons a week, which nobody wants to be more than half an hour long, it is only necessary to look into some of the so-called religious newspapers to find what a hard time of it they have.

We are seriously told by men of wide observation and experience in the sustaining of Sunday schools, that the value of these schools is much impaired when they hold their sessions immediately after morning worship, for the reason that the teacher is too much wearied by the one hour and a half of religious worship to instruct well, and the pupil is by the same means made too tired to learn. Can any one tell upon what logical or physiological principle the management and arrangement on Sunday ought to be different from what it is on other days of the week, and why it is, if all find it more agreeable and profitable to divide the time for study into short spaces on that day, they should not find it equally profitable on other days?

Let teachers say how much can be done in way of thorough study after pupils have been in school at work three hours. Compare the first hour with the fifth of our long sessions. Either there is no very keen interest at any time, or else the first two or three hours are spent in zealous study and the remainder of the time in a state of hungry unrest, waiting for school to be done. The first hour pupils are wide awake, ready to take hold of a new subject and understand it, appetites sharp for new ideas, bodies upright, cheeks with a healthy glow. During the fifth hour there are languid postures, drooping eyes, pallid faces, tired looks, absence of all vivacity, and a painful expression of impatience on the countenances of nearly all.

Reference has been made to the division of time on Sunday, and to the fact that on that day we never combine the services so as to make a session nearly as long as one of our high-school sessions. Reference might also be made to leading schools, throughout the State,

of the higher grades. The professional schools of divinity, medicine and law; the schools of technology, the normal schools, the colleges, the academies,—all by their practice bear testimony against the crowding of all the recitations into the fewest possible number of hours.

It is often said that the high school includes pupils from every part of a city or town; therefore, pupils who attend it have farther to go than pupils in other schools; hence, there is need that but one journey each day should be made, and that pupils should remain at the school room no longer than is necessary for purposes of recitation of all the classes, while most of the study is done at home. If this is true in the case of high schools, it is much more so in the case of the Massachusetts Institute of Technology and the State normal schools. In the Institute of Technology, according to the last catalogue, more than twenty per cent. of the students live twelve miles or more from the institute building, and board at home. Quite a number of them are more than forty miles. The average length of time required for this twenty per cent. to go from their homes to the place where they are instructed cannot be less than an hour and a half. If there is need of crowding all the exercises into a small space anywhere, on account of distance from home, it might well be here. But the hours of recitation are from nine to half past four, with an intermission of an hour and a half. The same, nearly, is true of the State normal schools. Courts of law, political meetings, public lectures, where the best effect is intelligently aimed at, are conducted on the principle of short periods of rest and work.

There is in one of our cities an annual course of six lectures every winter. These are given by some of the most interesting speakers in the country. They are not generally more than an hour and a quarter in length. If the arguments used in favor of one session a day in schools are worth anything, they would support the plan of combining two of these lectures on the same evening. What a saving of time, and traveling, and care of a hall, and work in the distribution of tickets, would be made by such an arrangement. Yet the verdict of the public is that one speaker is enough, though he occupy no more than a single hour.

The sudden change that is made in passing from the grammar school to the high school often causes serious inconvenience. Much of

the best material in our high schools comes from the families of laboring men, who take breakfast early and dinner at twelve o'clock. Until the children are admitted to the high school the family can all be together at dinner. After that time there are, every day, vacant seats at the table. The son or daughter, accustomed to take dinner at noon, comes home at one or two o'clock, after a fast of six hours or more. The healthy appetite has passed away. The social dinner table has been set and cleared; the high-school pupil takes his dinner, and like a dog eats it alone. Taking it upon a stomach that partakes of the languor and lassitude of the whole system, he fails to enjoy it while eating, or to digest it afterwards. There could not well be found a surer cause of dyspepsia; besides, there is the bad effect of taking a child from the family dinner table for three of the most impressible years of his life. A dinner taken under these circumstances, when the brain is weary and the digestion unfit to wait on appetite, must prevent good study in the afternoon. We believe that in our public schools all study ought to be done within the limits of school hours, and that in making schedules of recitations, teachers ought not to reckon at all on home study. It is painful to see a pale-faced, round-shouldered, shallow-chested girl, carrying home from school an armful of books at one or two o'clock in the afternoon, at the close of one of our long sessions, that she may do at home what she ought to do only at school. It is equally painful to see a robust, healthy girl doing the same thing, because she is in danger of coming to the condition of her weaker sister. Some good things on this point have appeared in the newspapers during the past year.

The long session doesn't amount to more than three hours of good work, however long it may be protracted. As a rule, no good study is done after the third hour. So that if it is determined that schools are to have but one session, they would better be only three hours in length instead of five, as they now are. Lessons assigned for a subsequent day cannot well be learned during the fourth and fifth hours of a session, on account of the exhausted state of mind and body. So if they are to be learned at all, the pupil must wait until a season of rest has passed. This, under the prevailing plan, can only be done by taking the books home for study there.

Let the first session close at the end of the third hour; then let

there be two hours of rest from all study ; in that time the system may become prepared for three hours more of good work. It appears to us that the two hours each day now so commonly spent in dreary listlessness, or painful attempts to goad the brain on to work during the last two hours of the session, might thus be made available for purposes of instruction, and really saved to the pupil. But it may be said : "Even six hours a day is not enough for doing all the study and recitation now required of high-school scholars." Then we should say : "Make the sessions three in number, of three hours each, if it be necessary to devote nine hours a day to recitation and study, or whatever length of time is needed to make the length of the school session conform to it." No teacher certainly can complain because he is required to be at the school room working with his pupils as long as they are required to work.

The one-session plan, which requires much study to be done out of school, discriminates against the poor. In order to study well at home, the pupil needs some place where he can in a measure be free from interruption and can work with comfort. A good many struggle into our high schools from homes in comparatively straightened circumstances. It would be well if there were many more of them, for they afford much of our best material. But they have not in their homes convenient places for study. Sometimes only one room in the house is heated, and that the one where all the work of the family is done—kitchen, sitting-room, parlor, nursery, all in one. When we put all school-time into five hours, and require study to be done out of school, we thereby say : "If you are in comfortable circumstances you can come into our school and enjoy the advantages of it fully ; if your father can afford to heat and light a separate room for you to study in, you have as good a chance in our school as any one else ; but if you are too poor for that, your poverty is your misfortune here as well as elsewhere ; you cannot pursue your studies in our school on the same footing with those who have spacious and well-warmed houses." This discrimination is one that, in many instances, bears with great severity.

The closing of school at one or two o'clock often leaves lazy pupils at liberty to roam about the streets afternoons. Many coarse boys are beyond the control of parents and need the restraints of the school.

A large number of such form the habit of sauntering idly about town, or drooling over dime novels, and thus lose all connection with study and drop out of school altogether. They need the influences which a high-school ought to give them, but are in many cases lost to those influences through the license afforded them when they are out of school, afternoons.

It is true that nearly all teachers, and a large number of pupils, are opposed to the views herein presented ; but it is not often that a person defends the one-session plan because he thinks it better for the bodies or minds of the mass of pupils, unless his personal convenience happens to be affected by it. There can be but little doubt that the one session suits the personal convenience of most teachers. It is assumed, however, that the schools are maintained for the benefit of the pupils.

The opinions of most physicians coincide with the principle laid down : Short, alternate periods of rest and work for the young. Why they do not more generally speak out their opinions is a mystery. It is not just to think so badly of the profession as to suppose them to be influenced by the fact that the long school sessions add largely to their practice.

It is said that the plan of doing the principal part of the work of the day between breakfast and dinner is becoming more common every year with business men, and that in our large cities, merchants and bankers very generally follow this plan. The answer to this is, a reference to the increasingly large number of business men that are cut off in the prime of life by paralysis, apoplexy, meningitis, pneumonia, and other similar diseases. If that is what we are educating our boys and girls for, we are on the right track in adopting one session a day.

You can easily drive a good horse forty or fifty miles a day, for weeks together, if you will feed and groom and drive him properly, and give him the right time to rest. You can kill a spirited horse, or disable him for life, by driving him ten miles improperly. So we think that a boy or girl, in ordinary health, can be kept at school forty-four weeks in a year, and all the while thrive, under the right treatment. The same boys and girls can be broken down by a single month of school work wrongly planned. A recent popular writer expresses the wish that it were possible to extend the genial influences of the Society

for the Prevention of Cruelty to Animals to the children of our schools. It would certainly not recommend the confinement of them five hours at a time, with so little intermission as can commonly be given in our high schools.

A. C. PERKINS, *in Mass. Teacher for Sept.*

MY CHOICE.

Yes, I know there are stains on my carpet—
The traces of small, muddy boots;
And I see your fair tapestry glowing
All spotless with blossoms and fruits.

And I know that my walls are disfigured
With prints of small fingers and hands;
And I see that your own household whiteness
All fresh in its purity stands.

Yes, I know my "black walnut" is battered,
And dented by many small heels;
While your own polished stairway, all perfect,
Its smooth, shining surface reveals.

And I know that my parlor is littered
With many odd treasures and toys;
While your own is in daintiest order,
Unharmed by the presence of boys.

And I know that my room is invaded
Quite boldly, all hours of the day,
While you sit in your own, unmolested,
And dream the soft quiet away.

Yes, I know I have jackets that wear out,
And buttons that never will stay;
While you can embroider at leisure,
And learn pretty arts of *crochet*.

And I know there are lessons of spelling,
Which I must be patient to hear;
While you may sit down to your novel,
Or turn the last magazine near.

Yes, I know there are four little bedsides
Where I must stand watchful, each night;
While you may go out in your carriage,
And flash in your dresses so bright.

Now I think I'm a neat little woman—
I like my house orderly, too;
And I'm fond of all dainty belongings—
Yet I would not change places with you.

No! keep your fair home, with its order,
Its freedom from trouble and noise;
And keep your own fanciful leisure—
But give me my four splendid boys.

Jennie Harrison.

ADDRESS TO SCHOOL PRINCIPALS.

Our annual gathering for the fifth time as an associated body, composed exclusively of professional teachers, impresses one profoundly with the changes of a few brief years. It is a comparatively recent thing to speak of the teachers' profession. Within the memory of many of us, teaching was an occasional occupation; a prelude to some higher employment, or the temporary resort of a young man out of business. The best talent in the profession was found in academies and colleges, and the best pay was there, of course. Such a thing as a science of teaching was unknown. Little method and little uniformity prevailed. Books upon education were rare. School-rooms were rude and rough, teachers earned mechanics' or farmers' wages, or such as servant-girls received, and physical ability was sought, rather than education or character. A good hand-writing was worth more than almost any other qualification; and one who could write well, was quick and accurate in figures, and able to flog the largest boy in the district, was looked upon as about the model schoolmaster. Female teachers were much less employed than now, their deficiency in physical strength being supposed to disqualify them effectually for school-room work. Yet it is certain that in many places, and in several respects, these old fashioned schools did excellent work. Partly because the communities which originated them believed in education, and kept their children in school till they were twenty-one or more; partly because they insisted upon a higher education for their professional men; almost every minister, lawyer and doctor of the eastern and middle States, forty years ago,

was a college graduate, and their influence was constantly at work, lifting the aspirations of the young. * * * Many of our public schools do the work of the colleges of fifty years ago. In 1822, geography and English grammar were in the college course of Amherst. Philosophy, chemistry and anatomy, were all the natural sciences taught; and Tytler's general history was a text-book for the junior class. Instances are on record of young men fitting themselves for advanced standing in college in a single year. Comparing this with the widely-extended courses of some of our high-schools, we see how much the idea of popular education has advanced, and how much the demand upon teachers is increased. Once granted that the State shall educate at all, and the question "how far it shall educate," becomes important.

The public are also learning that it takes knowledge to impart knowledge, and no longer tolerate that teacher who is but one lesson ahead of his pupils. It also recognizes that the power to impart is more essential than a knowledge of facts. * * * Every one of you knows some man of comparatively small scholarship, teaching better than another of much learning. One has the art of imparting, the other has not. Many of our colleges support certain great scholars whose names are kept to the front by the backers of those colleges, but often these men are not teachers. Some modest tutor, whose name is hardly noticed by any one, may be the real teacher. Unless he do the foundation work, the great professor talks over the heads of the youth. After reading Goldwin Smith's lectures on modern history, one cannot help asking how much the average Cornell sophomore learns from his teaching. All our educational schemes, however, are aspiring, and as schools and academies rise, colleges must rise with them, and the men who can really give higher culture will be in demand.

The graded school is a necessary outgrowth of the popular demand for more extensive education, with due regard to economy and thoroughness. I had almost said uniformity, but it is not possible, nor would it be desirable if possible, to have our schools turn out uniform scholars. Outside influences and different natural gifts prevent that dead level of attainment which is sometimes sought, but never realized. The simple idea of putting more work upon the pub-

lie schools made some sort of grading necessary to secure economy of time, to prevent dull or deficient pupils from loading down their classes, and to group together those of the same average working capacity. This idea has grown at last into a system of instruction in which the order of developement of the different faculties, the proper succession and proportion of studies, the best methods of securing given results, the proper methods of recording results and bringing these records before the minds of the public in such a way as to promote the welfare of the schools, are objects of *study*. The school principal now is not necessarily a teacher, but should be one competent to teach teachers; not an artisan, but a master workman; not merely one who knows how to impart knowledge, but one who can impart to others the methods by which a school can be successfully taught. It is obvious that scholarship alone is not enough for a school principal. There are hundreds of things required of him which are not to be learned in books. As well attempt to become a sculptor by reading, as to become a competent school principal. The graded school requires at its head a *professional teacher*. Any other endangers it. An excellent hospital nurse may make a very incompetent head of the hospital. An excellent watchmaker may be a poor superintendent of the Elgin factory. The more costly and complicated the machine, the more the danger of committing it to untried hands.

The graded school, like all other schools, has its enemies. Of course, those who oppose the public school in all its forms—and they are many—oppose this as more complete and more expensive than it ought to be. Would-be aristocrats object to its social equality. Private schools often oppose it because of its thoroughness. Business colleges, that profess to give a complete business education in three months, object to the time consumed in public schools. Hobby riders of all kinds object—that their hobbies are slighted. Some object that our courses contain too much; others are equally strong that we teach too little. Parents of dull, of lazy, or of frivolous children complain of the steady movement which requires every pupil to keep in line, or fall out and be left behind. Teachers complain of the drudgery of examinations, and regret that their pupils pass from them from year to year to be no longer under their control, and hence withhold their personal influence, and treat all pupils with equal indifference. Others object

to anything *artificial* in education, and regarding the graded school as the most artificial form of instruction, ring changes on the word *artificial* in condemning all its arrangements.

Of this it may be enough to say, that all civilization is artificial, and that a book, a map, a globe, a school-desk, or a clock and thermometer, are artificial.

Several defects, however, exist in the graded school, some unavoidable, others remediable. Not to trespass upon the ground which is to be covered in your discussion, I will touch them briefly, and indicate a few.

Many difficulties grow out of the *yearly system of promotions*. There is a sense of injustice hard to remove when a pupil who fails slightly upon a year's work, is compelled to do the whole over again. This difficulty ought to be provided for by the multiplication of grades, not perhaps in name, but in reality; by breaking up a grade into sections, which are gradually diverging during the course, but are not separated by intervals of a year, promoting even monthly, if need be. *I am disposed to urge the experiment* of the transfer of the teacher with the class to grade, not by any means as a rule, but as a frequent thing. The itinerant system of preaching, and the taking of new classes yearly, are much alike. Much can be said in favor of both. But the advocates of the itineracy in preaching are extending the term of service by degrees, and the experiment in schools is worth trying. In my opinion, the absence of strong personal influence is one of the greatest drawbacks to the success of the graded school.

Another difficulty encountered is the *proper provision to be made for those who, for any reason, will not grade well*; for those, for instance, who can attend school only in the winter, while the classes, from year to year, cover the same ground in the winter term. A rigid system, which requires the work of the regular grades of these irregulars, who are often those who have the strongest claims upon the public for an education, excludes them entirely from a free education, or from all education. Such pupils are to be fitted into the school *somewhere*; and if the best thing desirable cannot be secured for them, the best possible should be done. One imperative fact should determine the action of public-school authorities, viz: The

schools exist for the good of the public, and all rules must give way to special cases and necessities.

It is well known that in Germany, Switzerland, and to some extent elsewhere in Europe, industrial education in arts, manufactures, agriculture, horticulture and mining, is largely given by the government. Continual demands are made among us for something similar. Drawing has been largely introduced. Other branches, pertaining to the business of life, are called for. One urges horticulture as an essential part of a school education. Every man seems to be looking toward the public schools to educate men for his own occupation. How to combine industrial education with the other requirements of school is a question, gentlemen, which you may soon be called to solve. If our children were generally to be trained for one profession it would be easy of solution; but how to meet the problem, when sixty or more trades are represented in one city school, is not so easy.

It is certain that our school courses are already crowded, and that few complete them. Perhaps twenty-five pupils in a thousand enter our high schools, of whom not more than half complete the course. Many never complete the grammar school. Those who stay through are kept so closely at work that they are not able to learn much that pertains to getting one's living while in school. Leaving the high school at eighteen, the boys are not fitted for earning their living in any trade, and the girls know nothing of house-keeping. Parents who know that their children must earn their living are not usually inclined to start them earlier in those pursuits by which they are to win their bread.

The regular supply of trained and competent assistant teachers for our graded schools is yearly becoming a grave question. The average duration of the school life of our teachers cannot exceed three and a half years, not counting those who try and fail. Our normal schools—State, county and city—supply but a few teachers; not over two hundred a year, all told; and many of these are monopolized by private schools, or pass speedily into domestic life. Until some additional means of supply is devised, a large portion of the time of each school superintendent must be employed in training teachers. It seems absolutely absurd that a school prin-

cipal, who is responsible for the grading and general conduct of the whole school, should be expected to teach the whole time. The public too often fail to discriminate between the duties of a superintendent and of a principal teacher, expecting one man to do two men's work. The breaking in and proper training of young teachers requires no small part of the time and energy of principals.

It is an interesting sight to enter one of our large graded schools and to observe its workings, where, from the highest to the lowest grade, order, neatness, system, intelligence, promptness, are to be seen everywhere ; where accuracy, thoroughness, decision and force are displayed by the teachers, and diligence and earnestness are seen in the pupils. But this may be seen while the work done is mechanical and not very profitable. It impresses the thoughtful spectator as does the machinery of a great factory. This busy, whirling, polished, flashing enginery is remorseless and savage ; it may crush, or tear, or destroy the operator, as well as transform raw material into finished fabric. And while the superintendent points with satisfaction to his active workers, and tells what they are *doing*, let us ask the more important question, what are they *becoming* while they do it ? Is this busy life developing good character ? Are the homes of these children better because they are here ? Will these boys go out to do business on better principles because of their education ? Will they be more honorable, more truthful, more trustworthy because of this school ? Are they to be like James Fisk, sharp intellectually, but glorifying, by his daily practice, the most corrupting vices of effete civilization ? Will our girls be better wives and mothers, physically and morally, because of the graded school ? These are questions more important to us, fellow teachers, than grading and promotion, than the proper balancing of studies or the amount of oral teaching. Character is more than scholarship. Unless business, trade, politics and social life are cleaner, purer and holier, because of our schools, we come far short of the best attainable. Personal love, care and fidelity are necessary to foster good qualities in the heart of a child ; discipline must be tempered by personal sympathy to make it effective.

With our broadening views of the end and object of education, with clearer perceptions of the means and methods employed, let us

strive more earnestly that culture and growth may mark our work, that our pupils may be better children, better men and women, better citizens: may think more of what they are becoming than of what they are doing. We are making our pupils intellectually strong and cunning of fence: let us make them, not gladiators, but knights like Bayard, perfect in every manly exercise, but without fear and without reproach.

HENRY L. BOLTWOOD.

FINDING THE LATITUDE AT SEA.

But commonly the seaman trusts to observation of the sun to give him his latitude. The observation is made at noon, when the sun is highest above the horizon. The actual height is determined by means of the instrument called the sextant. This instrument need not be here described; but thus much may be mentioned to explain that process of taking the sun's meridian altitude which, no doubt, every one has witnessed who has taken a long sea-journey. The sextant is so devised that the observer can see two objects at once, one directly and the other after reflection of its light; and the amount by which he has to move a certain bar carrying the reflecting arrangement, in order to bring the two objects into view in the same direction, shows him the real divergence of lines drawn from his eye to the two objects. To take the sun's altitude, then, with this instrument, the observer takes the sun as one object and the horizon directly below the sun as the other; he brings them into view together, and then, looking at the sextant to see how much he has had to move the swinging arm which carries the reflecting glasses, he learns how high the sun is. This being done at noon, with proper arrangements to insure that the greatest height then reached by the sun is observed, at once indicates the latitude of the observer. Suppose, for example, he finds the sun to be 40° above the horizon, and the *Nautical Almanac* tell him that at the time the sun is 10° north of the celestial equator, then he knows that the celestial equator is 30° above the southern horizon. The pole of the heavens is, therefore, 60° above the northern horizon, and the voyager is in 60° north latitude. Of course, in all ordinary cases, the number of

degrees is not exact, as I have here for simplicity supposed, and there are some niceties of observation which would have to be taken into account in real work; but the principle of the method is sufficiently indicated by what has been said, and no useful purpose could be served by considering minutiae.—R. A. PROCTOR, in *Popular Science Monthly* for October.

EDITORS' DEPARTMENT.

Now that our subscribers have returned to their school-rooms, we hope they will not forget to give the SCHOOLMASTER a helping hand. This Journal desires to serve you faithfully, and to merit your good wishes and kind acts. It is true that the editors alone own it, and are responsible for it; they pay its bills and divide its profits.(?) But to a great extent it is your Journal, and its value and success depend very largely on you; if you wish to make it both valuable and successful, *Renew your own subscription promptly.—get others to subscribe,—send us items of educational news,—give us your thoughts and experience for its pages.*

Now is the time to get up clubs for the SCHOOLMASTER; see our new premium-list. Subscriptions are coming in pretty freely, singly and in clubs, but a little effort on the part of our friends will increase them four-fold: this will make us glad, and you too. One of the finest clubs received lately was from Perry County; we have the veteran Superintendent to thank for this; thirty other superintendents can do us an equally good turn.

As the schools begin and books and apparatus are wanted, it will be for your advantage to study carefully our advertising pages. We advertise nothing that we are ashamed of; the articles are good, and the advertisers "all honorable men"; at least we have found them so.

If your SCHOOLMASTER does not reach you properly, *write to us.* If you have queries you wish answered, *write to us.* If you want books or apparatus for your schools, and it is not convenient to send at once to the dealer, *write to us.* If you have anything you wish to say to the SCHOOLMASTER, or its readers, *write to us.*

The article in this No. taken from the *Mass. Teacher*, from the pen of A. C. Perkins, will bear and well deserves several readings by principals of graded schools and particularly masters of high schools in Illinois. It has almost become a custom among us to have but one session. The reason, and it appears to be a good one, generally

assigned, is to accommodate pupils who live at a distance. Mr. Perkins plainly sets forth the evils of the system. They demand consideration. From personal experience we are able to condemn the one session plan as being productive of much ill health both to teacher and to pupil. This effect is more to be avoided than the convenience of ten per cent. of the school that live a distance from the building is to be sought.

We lately read one of Justin M'Carthy's Novels; and we were surprised to find him using expressions which we are often obliged to correct our pupils for using. We give a few of these expressions. "I can guess *that* much." "There was one illusion gone, *anyhow*." This misuse of the words in Italics is frequent with him. We noted the following slang phrases. "Not, if I know it." "If I didn't, call me a New Jersey man." "She had never seen *anything much* in him." "It would not *hold water* for a moment." "It's very nice, but it *won't wash*." All the above quotations sound wonderfully like what we often hear on this side of the Atlantic; did he learn these expressions of us? Speaking of an evening party, given by people whose means were scanty, he says "The wine was poured *with*, not *at*, discretion." This is a *pointed* way of saying it, at least.

The annual meeting of the State Teachers' Association will be held at Bloomington. Arrangements are making for a large attendance and an excellent programme.

The first session will be held on the evening of Monday, December 29th; the last on Wednesday, December 31st—this gives two days and three evenings to the exercises, and keeps no one from home Christmas or New Year's.

The trains from all points reach Bloomington in the afternoon, thus placing the first evening session within the reach of all. The address of welcome and of the president will then be given. Tuesday forenoon the primary and high-school sections will meet; a general session will be held in the afternoon; a lecture in the evening. Wednesday forenoon the grammar-school and college sections will meet; a general session in the afternoon; a lecture in the evening. Among the subjects already decided upon are the "Normal School Question" and the "Press and Free School." Bloomington is convenient of access, the hotels are ample, and with the chairman of the executive committee already on the ground, it is hardly possible that other than a good time will be had.

We shall resume the publication of reports with the next issue. Blanks for reporting are ready printed, and will be sent to all school principals who apply for them. We hope to make this table of as much interest as usual. Let all the friends, who wish to report, write at once for blanks.

An important advent in the literary world is looked for next year. The house of A. S. Barnes & Co. announce the publication of a magazine to be called the *International Review*. Prof. John M. Leavitt is the editor, and in the list of names of writers, already secured, are the most eminent in Europe and America. The first number is to be issued January 1st; the subscription price \$5 per year.

The annual meeting of the county superintendents of Illinois is to be held in Chicago, October 14, 15 and 16. The full programme will be found on other pages in this issue. In view of the coming changes in the office, to be made by November elections, it is much to the credit of our county superintendents that they are willing to undergo the expense of such a trip just before retiring to private life.

All our cotemporaries seem to coincide with the opinion we expressed in our last number, that the recent meetings at Elmira were the most successful and profitable that the associations have ever held. We believe this result is due, very largely, to the foresight, energy and promptness of President Northrop. He had his work well planned; he presided with great urbanity and promptness; he showed decision, good judgment and firmness. *Bores* had small chance when he was in the chair. It did us good to see him shut off one whom we knew of old; he seemed to read "bore," "hobby-rider" on the speaker's face, for he set him down even before he had fairly mounted his little hobby-horse. The papers of the associations, when published, will make a volume that every teacher ought to own and study. We hope they will be issued promptly. All departments of the educational army were well represented at Elmira; the colleges sent some of their strongest men, and they made their mark. We think, however, that as related to the whole number in the country, the normal workers were the most fully represented. The meetings of that section attracted much attention; President Boyden did his work well. We wish, however, that in future meetings, less time might be wasted in discussing the question whether normal schools should do anything but strictly professional work. The place of holding the next meetings was not fixed.

In the normal section, at the recent meetings at Elmira, the man was present who thought that normal schools ought not to teach any arithmetic, geography, grammar, etc., but should limit their work entirely to theories and methods of education. In fact, this man was quite numerous at Elmira, and he thrust himself forward in the discussions with his accustomed modesty. He is always at those meetings, and that little hobby of his requires much time to show off its paces. He is rarely or never a man really engaged in the normal-school work; but, of course, this fact enables him to see what is wanted much more clearly, and to express his opinions with increased positiveness. Sometimes he is the teacher of some academy, or *higher* institution; he does not like to have any dangerous rivals in his search for patronage; hence these tears. Sometimes he is simply one of the *genus*

theorizer; and, if facts will not harmonize with theory, why, so much the worse for the facts.

One thing is certain, normal schools must continue to teach the branches of school study till they are better taught elsewhere than they are now. Besides, it is clear to our mind, that one can better show how to teach a study while teaching it than in any other way. If we want to show one how to teach arithmetic we can do it best by teaching arithmetic. Normal teachers are sometimes too ready to allow these fellows to "raise a dust" and almost hide the real good that normal schools have already accomplished. Some at Elmira almost pronounced normal schools a failure because they are not purely and simply *professional*. Now, the fact is, that the normal school that does nothing but professional work, scarcely exists in this country, or ever has existed here; and yet normal schools have done a work that has given the very word "normal" a *cash value*. If it were not so, we should not find every *one-horse* academy and fifth-rate college so anxious to advertise its "normal department." It was not so twenty years ago. Let those who are so ready to decry normal schools as they are, with all their imperfections—and none feel their imperfections more than earnest workers in them—let such, we say, tell us why they are so anxious to steal the name "normal," if the normal schools have been such poor concerns.

Another year in the history of our schools is begun. The harness is on, the work commenced. The evils to be combated already loom up before us in almost huge proportions. Irregular attendance, poor gradation and classification, entreaties of parents to promote and push their children, new assistants,—these are common obstacles to the complete success of all; and yet no one of them is insurmountable. Those teachers who are in their places for the first time—who are new to the town—have, in addition to the above, still other hindrances to progress. Circumstances must, in all cases, shape the conduct of the management of the school. A few laws of conduct, however, are inflexible. The immediate predecessor of the teacher should be spoken well of; his work never belittled, even though it deserves to be.

The new teacher will gain little by "pitching into" any text-books he may find in use. He cannot afford to make extra work for himself, by changing the books already in the hands of the pupils. The surest way to the affections and confidence of the patrons is, truly, through the children; next to them, through the pocket. The father is not likely to smile at the school management while he is paying several dollars for a new reader, arithmetic and geography of the same grade as those his child already owns. It will be remembered, too, that in districts working under the general law the directors must do all work in the text-book line.

Again, the teacher new to his town, will gain no permanent good by making *evident* efforts to please and compliment patrons and children. Let his course be manly.

Once more, new teachers from normal schools will do well to talk little about the school from which they come. The neighboring districts are taught by students from other schools and colleges, and are placed in antago-

nism to one who commences his career by loud talk in self-praise. The school at which one is educated receives the commendation it deserves, not by what its graduates *say*, but by what they *do*.

It must be remembered that no one school sends out the best teachers in the State. The best teachers come from many schools. Then let every new teacher, for the first three months at least, "hold his tongue," but *work* and keep his eyes open. The people will ascertain his worth soon enough; and unasked commendation is worth more, infinitely more, than sought praise.

MATHEMATICAL CORNER.

PROBLEM I. Given the equation

$$x + 6\sqrt{x} = 91$$

to determine the value of x

Solution: Squaring we have

$$\begin{aligned}(x - 91)^2 &= 36x \\ x^2 - 218x &= -8281.\end{aligned}$$

Whence $x = 49$ or $x = 169$.

But this latter value does *not* satisfy the given equation. Why did we obtain a *wrong* answer? Give the true solution of the given equation.

PROBLEM II. Let

$$i = \sqrt{-1};$$

to find the value of

$$\sqrt{i}; \text{ also of } \sqrt{-i}.$$

In other words: What is the reduced or simplified value of

$$\sqrt{\sqrt{-1} - 1} \text{ and of } \sqrt{-\sqrt{-1} - 1}?$$

PROBLEM III. In Ray's Algebra (part II. page 105, example 20), we find the following: Divide the fraction $\frac{8}{3}$ into two parts, so that the numerators of the two parts taken together shall be equal to denominators taken together.

Show that this question admits of an infinity of solutions, and give a few of them.

W. S.

MARINE, ILL.

Correspondents are showing much interest in our mathematical questions, and we have received several new ones for future use. We would suggest to all who send us questions for insertion, that they should send their own solutions also; that is, in all cases where the questions are not asked for the *information* of the one sending.

Solutions of the "box" question in August number.—ALGEBRAIC.—Construct the box so that the top and bottom shall extend to the sides of the cube in all directions, and let the sides extend to the ends of the box. Let x = one side of the box in inches, and let a = thickness of the plank. The area of one side of the box will be x^2 inches, and the total area $6x^2$ inches. The area of the plank is 12168 inches; add to this the area of 8 edges, that

are x inches long and a inches wide; and 4 edges that are $(x-2a)$ inches long and a inches wide, and we have $12168 + 12ax - 8a^2$ equal to the area of the box. Hence,

$$6x^2 = 12168 + 12ax - 8a^2, \text{ or } x^2 - 2ax = \frac{12168 - 8a^2}{6}$$

Completing the square and extracting the root,

$$x - a = \sqrt{\frac{12168 - 8a^2}{6}}; \text{ hence } x = \sqrt{\frac{12168 - 8a^2}{6}} + a$$

Form this may be derived the following general

RULE—From the area of the plank take twice its thickness; divide the remainder by 6; extract the square root of the quotient, and add the thickness of the plank to the root. The result is the length of the required cube.
B. B. L., *El Paso, Ill.*

ARITHMETICAL.—It may be seen that a cubical box can be made of six square pieces of plank, except two corners, each of which will be a cube whose side will equal the thickness of the plank. In this case, the area of these two corner pieces will be twice the square of 3 inches. Hence, take 18 inches from the area of the plank, divide the remainder by 6, and the square root of the quotient will be the length of one of the six pieces, which is 45 inches. Add 3 inches, the thickness of the plank, and we have the length of the side of the required cube.
J. C., *Belleville, Ill.*

It is also correctly solved by E. H. K. Our correspondent from Waterloo, Iowa, had a misconception of one point in the question.

(It will be observed that J. C.'s reasoning leads him to exactly the process derived from B. B. L.'s formula.)

R. R., of LaPorte, Ind., sends a solution of the problem concerning the dish and cover, published in our April number. He solves by representing the cost of the dish by a line, and then determining the relations of the parts by doubling the line upon itself.

EDUCATIONAL INTELLIGENCE.

ILLINOIS.

La Salle County.—County Superintendent Williams is a candidate for re-election. He has been nominated on two tickets—Republican and Farmers.

Ottawa schools opened full, with a first-class corps of teachers. Will Jenkins remains as superintendent.

Peoria.—The county normal and city schools are under full headway. Mr. J. E. Dow is city superintendent, and Mr. S. H. White, principal of the normal.

Miss Mary W. Whiteside, formerly a teacher in one of the Chicago public schools, has been nominated by the republican convention of Peoria county for the office of county superintendent of schools.

Pike County.—The public schools in Chambersburg will re-open next Monday. They retain their present principal, Mr. C. I. Swan; also B. S. Greenwell, the former teacher in the grammar school. They are both live, practical teachers. Miss Mary Ellege takes charge of the primary department.

The public schools of Griggsville are open. Prof. Dobbin who has been teaching in the Pike county normal school, is the principal for the coming year.

Prof. H. M. Corsbie, who has been teaching in the normal school at this place during the summer, left this morning for his home in Mt. Pleasant, Iowa, where he will shortly enter into a matrimonial alliance with an accomplished young lady of that city. Prof. C. is a most excellent gentleman and fine teacher. During his sojourn here, he has made a host of friends, who will unite with us in wishing him great joy and future happiness in his new role of life.—*Pittsfield Old Flag*.

Coles County.—The Mattoon East Side schools opened, with an able corps of teachers, and otherwise under favorable auspices, Sept. 1st. Nearly 500 pupils were enrolled. Vocal music has been introduced, as a distinct study. A primary text-book in composition has been placed in the hands of the grammar and higher intermediate classes, and a systematic method of moral instruction has been adopted. The course of study for the high school, of which the superintendent Mr. N. C. Campbell, has charge, has been fixed, and the first class will graduate at the close of the school year.

The West Side began with an attendance of 376, J. W. Lanning, principal. The Catholic school, under their instructors, began with 54 pupils.

Shelby County.—The institute of this county convened at Shelbyville, Aug. 25. Mr. E. A. McGrew, county superintendent called the meeting to order. The organization was effected by making Jephthah Hobbs, President; S. P. Myers, Vice-President; J. W. Cokenower, Secretary; W. E. Nelson, Assistant Secretary, and Miss S. J. Roland, Treasurer. Ample and interesting lectures were given by the President, Messrs. Cokenower, Glenn, Warner, McDermith, Ragan, Lane and others. Dr. Davies lectured on one evening, and Dr. Phillips on another, both for the benefit of the institute. Mrs. Mouser, with her efficient aids, furnished music. Among the resolutions passed was the following, complimentary to Mr. E. A. McGrew.

Whereas, there is a great benefit resulting to teachers by the holding of properly organized institutes, and whereas the organization of the present Institute was "mainly" due to the exertions of E. A. McGrew, county superintendent of schools, and whereas he has in all ways and at all times acted in a fair and impartial manner in his official capacity, as well as in his association with us as a member of our body, and whereas he has at all times used all reasonable means in his power, to promote the standard of teaching as a profession; *therefore*, be it resolved, that our thanks are due and are hereby tendered to E. A. McGrew for services rendered in this behalf, and that a committee be appointed to present him a copy of these resolutions, and that the Secretary spread the same upon records.

Bureau County.—Princeton high school opened this year with an enrollment in excess of any heretofore since its organization. This is one of the early organized township high schools in the State. If any argument were necessary to advance the organization of others, the history of this is ample. The new law now, makes such a school possible in every township in Illinois; while all could not expect to obtain as efficient a head as is Mr. Boltwood, yet each could be made a power.

Ogle County.—The schools at Rochelle, in charge of P. R. Walker, opened with an increase of forty-two over last year. A high-school department has been organized. The schools at Creston bid fair to revive again in the hands of Mr. Geo. Blount and Miss Freeman.

St. Clair County.—The county institute in charge of J. P. Slade, county superintendent met in Belleville, Aug. 29. Hon. Newton Bateman, Prof. T. J. Burrill, Mr. Henry Raab, Miss M. Challenor, Miss Mary Evans, Mr. E. Feigenbutz, Mr. E. Anerswald are among the names we find reported as giving exercises. This county has, especially since the advent of the present superintendent, been notably in the advance in institute work. The session for 1873, was evidently no exception to the general rule. One hundred and eighteen enrolled their names and paid their dues. Mr. C. A. Singleterry, was the secretary. Mr. Bateman lectured one evening to the citizens and institute, on the subject of collegiate education. The following resolutions passed at the session are indicative of the excellent spirit of the teachers of St. Clair county.

1. *Resolved*, That our warmest thanks are due our worthy county superintendent, J. P. Slade, for the energy he has shown in organizing and conducting the exercises of the institute.

2. *Resolved*, That Prof. T. J. Burrill, of the Illinois Industrial University has our most sincere thanks for the great service he has rendered us during the session, as lecturer, friend and adviser.

3. *Resolved*, That we tender our hearty thanks to the Hon. Newton Bateman, our State superintendent for his excellent address upon the Importance of Correct Methods of Teaching, especially as applied to primary instruction.

4. *Resolved*, That we believe the new studies added to our common-school course are necessary auxiliaries in the instruction of our pupils; that they need not interfere with, but may materially aid in, the teaching of the other branches.

Also, that it is our duty as teachers to treasure up and add to the store of useful information which we have gained at this session of the St. Clair county institute, not so much for our own personal benefit, as for the benefit of those placed under our instruction.

Springfield.—A special meeting of the board of education was held at the office of the superintendent, on Saturday at 2:30 o'clock p. m., and the following resolutions, with reference to the death of the late Rev. Perry Bennett, adopted:

WHEREAS, It has been reported to this board that Rev. Perry Bennett, principal of the second Ward school, died on the 5th instant,

Resolved, That this board bears cheerful and grateful testimony to the purity of the life of Mr. Bennett, and to the learning and fidelity and patience with which he discharged his duties while connected with the schools of the city.

Resolved, that the board, while testifying their own sense of the merits of the deceased as a teacher, as a citizen, a neighbor, and a sincere teacher of Christianity, extend their earnest sympathy to the teachers of the city, who have lost an esteemed associate, and to the children who, by the death of Mr. Bennett, are deprived of a zealous and efficient instructor.

Resolved, That we sincerely condole with the family of our deceased friend and associate, and will attend his funeral at 3 o'clock at the North Baptist Church.

Meeting of the City School Teachers.—The teachers of the Springfield city schools met on Saturday morning, the 13th inst., at the High-School building for the purpose of holding an Institute as provided by the rules and regulations of the school board. After the opening exercises, which were conducted by Mr. Sampson, Mr. Sampson was elected chairman, and Miss Sell was made secretary.

The Superintendent, Mr. A. M. Brooks, then made some remarks. In the forty-five minutes occupied by him, he made many good points which were appreciated by the assembled teachers. He wished the teachers to see that their pupils were tidy and in proper condition for school. He wished all the good things introduced by the former Superintendent preserved. After a great number of useful hints as to how to succeed, he declared that the whole secret lay in the little word *work*.

The Rev. Mr. Shaw followed in some very appropriate remarks.

After a recess, Mr. Piquenard, the State House architect, entertained the teachers with some remarks on drawing. He thought the old method of copying drawings a very bad one. The pupil should draw from objects placed before him. Drawing is seeing. A person who cannot see an object as it is cannot draw. No books were needed, aside from those necessary to prepare the teacher in the methods of instruction. He thought Chapman's American Drawing Book contained many good points. The whole talk appeared to us to abound in good sense, and the methods pointed out by Mr. Piquenard, if followed understandingly, cannot but prove a success.

Mr. Chas. F. Willcutt then gave a lesson in penmanship.

Mr. Sampson discussed the spelling question. It was evident that the gentleman had thought and experimented upon the matter, as he favored some methods more modern than those of "the time when we were boys."

Mr. Gardner introduced a motion to the effect that a committee be appointed to draft suitable resolutions of respect in honor of our late friend and co-laborer, Rev. Perry Bennett. Adopted. The chair appointed Mr. Gardner, Mr. Brooks and Mr. Willcutt, as said committee.

The dinner hour having arrived, the Institute adjourned.

The following extract is from a recent editorial of the *Journal*:

Our School System and its Assailants.—The public-school system seems again to be the basis of considerable agitation, by reason of the assaults upon it in New York city. Its assailants seem to be the standing foe of popular education,—Papacy—and the attack gives evidence of being a preconcerted movement, craftily planned, and one giving promise of at least partial success, unless the friends of the system rally to its support. The aim in New York appears to be to establish denominational schools in great numbers, and so to depopulate the public schools, the teachers of which are paid according to the attendance, as to render the profession of teaching in them the reverse of self-sustaining, and by that means influence the closing of the schools. Of course this programme, if carried out, would only affect the schools of New York, but it would appear, from the utterances of the press at a distance, that the movement is destined to be a general one, and that in its opposition to public schools the New York movement already has its allies engaged in paving the way for a general attack.

The latter lose no opportunity to visit opprobrium upon the school system; as an instance, we may cite the case of the *Register* of this city, which on Friday last, in the course of an article on city affairs, spoke of the "public schools of the State, and especially of Springfield," as becoming "*an intolerable nuisance.*"

Some of the papers are not as outspoken in their opposition as the one we have quoted, but the same views are advanced, in effect, that the public schools are becoming too expensive and should be discontinued or the scholarship reduced to a mere primary standard. The latter plan is advocated by some who would have more advanced pupils

attend the religious schools, which it is purposed to establish, but there are not wanting those who desire the entire abolition of the public-school system. Believing that the attack is destined to be a general one, some of the New York papers are raising the cry of alarm, and a distinguished clergyman writes a communication to the New York *Times* advising a union of all Protestants to meet and repel the attack. This may be the position of parties there but we believe that not a few besides Protestants are friends of the public-school system here, and that in the event of it being attacked, or its interests in any way placed in jeopardy, all would unite in the support of a system of education which while it has advanced the interests of the country generally, has especially done so in this State and throughout the west. No, we can scarcely believe that the enemies of popular education will hazard a general attack upon one of the main bulwarks of Republicanism, despite the encouragement of a portion of the press. The friends of education will nevertheless, look with suspicion upon all attempts to decrease the usefulness or in any way to retard the influence of our public schools whether the opposition is based on the score of pretended economy or otherwise.—*Springfield Journal*.

Effingham County.—No county in Southern Illinois has made more evident strides in prosperity, during the last five years, than this. Effingham, the county seat, is a goodly city, and is paying much attention to schools. One fine building has recently been erected. The Democratic party, which is largely in the majority, have nominated for school superintendent *Mr. Owen Scott*, a number one school man. The school interests are in luck if Mr. Scott is elected.

Marion County.—Mr. L. S. Kilborn is now teaching his fifth year at Odin. We do not know how it may be at home, but whenever we learn of the fifth year, in one town, of the principal of a school, we feel like congratulating that people on the permanence of their school system. It is a fact complimentary to the people, to the school, and to the teacher. Hail the day when teachers make a profession and are permanent in their situations, as some twenty school principals in Illinois now seem to be.

St. Clair County.—The High School at Belleville is now open, with Mr. James P. Slade as principal. Mr. Henry Raab, for many years at the head of one of the grammar departments has been elected superintendent of the schools of the city.

Livingston County.—Lieut. J. W. Smith is the nominee of the Republicans for county superintendent. He will make a good one.

Corroll County.—The schools at Mount Carroll, in charge of A. C. Cotton, assisted by Misses Bigger, Forbes, Ferrin, Kridler, Irvine, Fletcher and Mr. Aaron Smith, opened Sept. 8th.

The teachers are making persistent efforts to maintain regular and punctual attendance. As one help they have circulated an address to their patrons, ably setting forth the value of regular attendance.

One of the arguments presented, is the following, strong and incontrovertible:

But there is yet another evil resulting from this habit, which, although not so immediate in its results, yet it is not the less to be deprecated. Both experience and observation teach us that success in any calling in life depends upon constant and unremit-

ted application. We also know that habits once formed in early life are not easily shaken off in maturer years. Many a man has failed in business because he lacked the habit of steady application. When will your children have a better opportunity to acquire habits of close attention and application to the daily occupations of life than during their school days and in the school room.

Perry County.—The institute of this county commenced at Du Quoin, on the 18th and closed on the 29th of August. Nearly every teacher in the county was present at each session. Julia E. Kennedy was the leader in the work. H. A. Coolidge, of Litchfield, and G. F. Foster of Du Quoin did much good work. W. W. Edwards and Miss Mary E. Cotton, teachers of the county, each gave a lesson in Botany. Nell Thomas, a Perry county girl, but a teacher in the St. Louis schools, gave a lesson on leaves, to a class of children. Many other teachers assisted. Where each and every one did so well, praise of any one would be invidious. It was a complete success. "Lord now lettest Thou thy servant depart in peace."

A gentleman who was present at the Perry county institute, compliments in the highest terms, the work of Mr. C. Laban Kruse, for the clear manner in which he expressed himself on such subjects as were in his line of duty. We have heard of Mr. Kruse before, and are not surprised to learn that he is making a bright record in Southern Illinois.

Menard County.—Petersburg.—On Monday last the school bell sounded and the children were once more reminded of the fact that the school year had begun. Yet, before we heard the pealing of the bell, the crowds of children passing by with their books under their arms plainly foretold their destination. There are at present two buildings used for school purposes. The main building with six departments is situated on south Main street, and the other on north Main street. The following teachers are located in the main building: Prof. M. C. Connelly, principal and superintendent, Miss Kate Hutcherson, 2d assistant; Miss Mary Batterton, 3d assistant; Miss Grace Brown, 4th assistant; Mrs. George Maltby, 5th assistant; Miss Lizzie Snape, 6th assistant; Mr. Thomas Levering, 1st assistant, and Miss Fisher, 7th assistant, are situated in the north end of town.

Prof. Connolly informed us that there are upwards of two hundred scholars already on the rolls, exclusive of his department, which is not in session during the present week.

We are glad to say that, in our opinion, the public schools have never been in so flourishing a condition as at the present time. This seems to be the universal expression heard on every hand, and under the present management they will not be likely to retrograde. We have known Prof. Connolly for many years, and he has always stood in the front rank of teachers, with the schools under his supervision. The people of Petersburg have naught to fear from that quarter, as this is his third year in our schools, we need say nothing more.

Mr. Levering has been raised and educated among us, and promises to become a valuable accession to the teachers' profession.

Miss Kate Hutcherson is well known in the community and has taught several schools with decided success.

Miss Mary Batterton was employed in the schools last year where she gave the best satisfaction.

Miss Grace Brown was also in last year's corps of teachers, and by her close attention to business and to the wants of her scholars, has endeared herself to both scholars and parents.

Mrs. Emma Maltby is a teacher of known ability, and taught in the schools some years ago.

Miss Lizzie Snape has served the people of Petersburg so long and so faithfully in the school room that her name is already a household word.

Miss Ella Fisher has never taught in our public schools, but comes well recommended. We doubt not but she will fill her position with honor to herself and profit to the community.—*County Times*.

MISSOURI.—*Hannibal*.—The public schools of this city opened Sept. 1st, with J. F. Hamilton, as superintendent, and G. W. Mason, as principal of the high school. There are twenty-six teachers employed, with an enrollment of one thousand and fifty pupils.

PERSONAL.—HENRY T. WRIGHT takes charge of the schools at Carbondale, Ills.

JOHN B. WHITE is principal of the schools at Adel, Iowa.

J. H. STICKNEY remains for the second year at Altona, Ill.

L. S. KNIGHT goes from Fort Madison, Iowa, to Woodstock, Illinois.

ALBERT W. YOUNG goes from Woodstock to Harvard, Illinois. His first assistant is Miss Hayner, one of the best teachers in that part of the state.

H. B. COE takes the 3d ward school in Sterling.

JAMES E. HARLAN, lately of Sterling, has become a Professor, Cornell College, Mt. Vernon, Iowa.

JOHN T. LONG is in charge of schools at Warsaw, Ill.

N. B. REED takes charge of the schools at Albion, Edwards county, Ill.

T. L. McGRATH goes to Equality, Ill.

CHARLES ROBINSON, late Superintendent of schools at Marshalltown, Iowa, is travelling agent in Iowa for the publishing house of A. S. Barnes & Co.

J. W. PRINCE goes from Griggsville to Pittsfield as Superintendent of schools.

OBITUARIES.—Prof. JOHN F. STODDARD, author of Stoddard's Series of Arithmetics, died early in August of this year.

Prof. WILLIAM RUSSELL, died at his home in Lancaster, Mass., about the middle of August; his age was about seventy-five. Prof. Russell was extensively known as an accomplished literary man, and an elocutionist. He was by birth a Scotchman, but came to this country in early manhood, and passed nearly his whole life teaching in various capacities; for several years past he has taught elocution in colleges and in the Massachusetts State Teachers' Institutes. He was also a well-known author of works on elocution. Few men possessed a more genial and kindly spirit than Prof. Russell; and those who were fortunate enough to know him will long hold him in kindly remembrance.

Rev. JOHN TODD, D. D., died in Pittsfield, Mass., near the close of the month of August. He had been pastor of the First Congregational Church in that town for nearly thirty years. Dr. Todd was well-known as a writer; he was the author of

several books for the young, and a frequent contributor to religious papers. Two of his works, *The Student's Manual* and *The Index Rerum*, are especially adapted to the wants of students and literary men; the first ought to be in the hands of every young student; and many are loud in praise of the advantages to be gained from the second. At the time of his death, Dr. Todd was about seventy-three years old.

The Formation of Articulate Sounds. The sounds of the vowels, in ordinary speech, are produced by a continuous expiration, the mouth being kept open, and the form of its aperture changing with the utterance of each. Certain consonants may also be pronounced, without interrupting the current of expired air, by alterations in the shape of the throat and mouth: *h*, for example, is the result of a little extra expiratory force; *s*, *z*, *sh*, and *j*, in some cases, *th*, *l*, *r*, *f*, and *v*, may likewise all be produced by continuous currents of air forced through the mouth, the shape of the cavity of which is peculiarly modified by the tongue and lips. All the other consonantal sounds of the English language involve the blocking of the air-current in its passage through the mouth. In the case of *m* and *n*, it is prevented from issuing through the lips, and is forced through the nose: while the remaining consonants, termed explosives, such as *b* and *p*, are produced by shutting the passage in both mouth and nose, and forcing the vocal current through the obstacle furnished by the mouth, changes in the form of which give to each consonant its peculiarity.—From "*Tongueless Speech*," in *Popular Science Monthly* for September.

Ages of Noted Americans.—Lieutenant General Philip H. Sheridan was 42 on the 6th of March last; General William Tecumseh Sherman, 53 on the 8th of February last; President Ulysses Simpson Grant, 51 on the 22d of April last; Vice President Colfax, 50 on the 23d of March last; Senator Oliver Perry Morton, 50 on the 4th of last August; George S. Boutwell, 55 on the 28th of last January; Reverdy Johnson, 77 on the 21st of last May; Charles Sumner, 62 on the 6th of February last; Henry Wilson, 61 on the 12th of last February; Benjamin Franklin Butler, 55 on the 5th of this month, November; William D. Kelley, 59 on the 12th of April last; Cornelius Vanderbilt, 79 on the 27 of May last; Jay Cook, 52 on the 10th of August last; William Lloyd Garrison, 69 on the 12th of December next; Wendell Phillips, 62 on the 29th of this November; Henry Ward Beecher, 60 on the 24th of last June; Andrew Gregg Curtin, 56 on the 2d of last April; Theodore Tilton, 38 on the 2d of last October; Gerritt Smith, 76 on the 6th of March last; Daniel Drew, 76 on the 28th of last July.

The cable dispatches from the Vienna Exposition announce that the "gold medal of merit" has been awarded to Messrs. Wilson, Hinkle & Co., of Cincinnati, as "the publishers and manufacturers of the best school-books in the world."

Americans generally, and Cincinnatians in particular, will the better appreciate this high honor when told that all the great book-publishing houses of Leipsic, Berlin, Vienna, Paris, London, and other cities, competed for the grand prize.

The books of the Post Office Department show that since the first of June the largest amount of business ever done since the organization of the Department, in the manufacture of stamps, stamped envelopes, wrappers, etc., took place. The increase was caused in a great measure by the abolition of the franking privilege.

ILLINOIS NORMAL

The Normal University began the first term of its seventeenth year, on the 8th of September. If the numbers desiring admission are any test, it would seem that the reputation of the Normal has not suffered seriously, in consequence of the malicious and persistent *lying* of its enemies. Good fruit-trees are more likely to have clubs and stones thrown at them than worthless ones. At the beginning of the second week, there were 311 students in the Normal Department, and 167 in the Model. The teachers in all the several departments are the same as last year; except that Miss Harriet M. Case of the class of 1866, takes the place made vacant by the resignation of Miss Osband. The entering class of the Normal numbers about 150; fewer were rejected on examination than last year, although the examination was rather more severe. This term, the young women constitute about four-sevenths of the school, a large majority of the new class being women; this is usually the case in the Fall term, and the opposite is true in the Spring. The Institution is working vigorously and harmoniously in all its Departments, Societies and Associations.

The heating apparatus has been changed, and put in order during vacation. The steam-pipes are mostly removed from the school-room, and we shall be free from the noise of their *snapping*. New and complete arrangements are made for ventilating the building; so we may reasonably hope to have pure air to breathe. We hope it will not make us sick from sheer novelty.

The new Hotel in Normal is open, and is well spoken of by its patrons. The new Christian Church is rapidly approaching completion; it is on the corner north of the house formerly occupied by Mr. Daniel Sill. The Congregationalists have done nothing towards rebuilding their church. The project of uniting Normal with Bloomington is again exciting considerable talk; its success is quite doubtful. Normal people fear the advent of dram-shops.

Nearly all the last Normal class are engaged for teaching the coming year. Two or three decline to teach. This is a breach of faith that they should be ashamed of.

JOHN B. STOUTEMYER, of the last class, goes into the High School to fit for college.

ED. JAMES, it is said, will go to Evanston instead of Cambridge.

FLORA PENNELL has gone to Vassar.

CHARLES DEGARMO teaches in Naples next year.

DAVID GIBBS and wife have returned to Rosemond for their third year of service.

JAMES M. WILSON returns to Bloomington, Ind.

FRANK RICHEY will continue another year in Milwaukee; the same is true of WADE H. RICHARDSON.

MARRIED.—JAMES M. WILSON and SALLIE TOMLINSON. R. M. HITCH and NETTIE SPINK.

Several more announcements of this kind may be expected soon.

BOOK TABLE.

Thesaurus of English Words and Phrases: by PETER MARK ROGET. Revised and Edited by BARNAS SEARS, D. D., LL. D. GOULD & LINCOLN, Boston.

This is a new, enlarged and improved edition of a book first published in this country nearly twenty years ago. At that time it was very highly commended by scholars and by the press; but we are sure that this edition is vastly more valuable than the first was; it is a veritable *treasury* of English words and phrases, containing also many from other languages. The present book is a reproduction of the original, "unabridged and entire," with considerable additions.

These words of the author well set forth the purpose of the work: "The purpose of a *Dictionary* is simply to explain the MEANING OF WORDS, and the word being given to find its *signification*, or the *idea* it is intended to convey. The object *here* is exactly the converse of this; the *idea* being given, to find the *word* or words by which that idea may be most fitly and *aptly* expressed." Again, "My object, be it remembered, is not to regulate the use of words, but simply to supply and to suggest such as may be wanted on occasion, leaving the proper selection entirely to the discretion and taste of the employer." In carrying out this plan, ideas are divided into six grand classes, and these again undergo the process of sub-division three times, resulting in one thousand separate heads, under which the words and phrases are arranged in the several different forms or groups. These heads are all classified and enumerated; these tables are followed by the body of the work, occupying about three hundred pages. We then have nearly two hundred pages of index of the words used, referring to the heads where they are found; and the whole closes with a complete alphabetical list of the *foreign* words and phrases used, together with their meaning.

Most of the words are arranged in parallel columns, in antithetical form. As a sample of the method of the book, we take the contrasted words *News, Secret*. They are found under CLASS IV. INTELLECT. DIVISION II. COMMUNICATION OF IDEAS. SUB-DIVISION II. MODES OF COMMUNICATION. HEADS, 532 and 533.

532. NEWS, piece of information, tidings, budget of news, word, advice, *aviso*, message, errand, embassy, despatch, *bulletin*.

Report, rumor, hearsay, *on dit*, fame, talk, gossip, *ouï-dire*, scandal, buzz, *bruit*; the town-talk.

Letters, mail, post, 592 letter-bag.

Glad tidings; fresh news; stale news; a stale story.

Narrator, &c., news-monger, tale-bearer, spy, scout, errand-boy.

Phr. "Thereby hangs a tale."

533. SECRET, *arcanum*, profound secret, mystery, *arriere dispensee*, problem, enigma, riddle, puzzle, *pons asinorum*, conundrum, charade, rebus, logograph, monogram, paradox, maze, labyrinth, perplexity, chaos, the Hercynian wood; *Terra incognita*, 528.

Phr. A sealed book; the secrets of the prison-house.

This group of words, which we have chosen as a sample, is one of the shortest; but it will sufficiently illustrate the style of the book, and will show how it may be used to suggest words upon any subject, to one who is desirous of using them.

The Bible and the School Fund: by RUFUS W. CLARK, D. D. Boston, LEE & SHEPARD. Pamphlet form, 127 pp.; price, 25 cents.

We have read this little book with much interest; it is an earnest and vigorous argument for our school system as it is, with the Bible as a recognized part of its machinery. We cannot help thinking that the author's argument on the main question would

be stronger, had he spent less space in direct attacks on the Catholic Church. Whether that Church is good or bad, we conceive has really little or nothing to do with the question in hand. To those friends of the Bible who are ready to concede its expulsion from the schools, Dr. Clark's arguments ought to appeal with much force. For ourselves, we hope the time will never come when the Bible shall be excluded from the schools, nor kept in them, by force of any general law on the subject. We repeat, as we have several times said in these pages, we believe the true course is to leave the matter wholly in the hands of the local authorities; and, if the majority establish schools such that any individual, sect or class cannot conscientiously use them, their remedy is to remove their children and educate them elsewhere at their own expense. This book is full of interest to all who are concerned about this question; and it is worth the careful perusal of all such persons.

Rolph's Normal System of Penmanship, complete in six books. By H. ROLPH. ADAMS, BLACKMER & LYON PUBLISHING CO., CHICAGO, ILL.

We have, at the request of the author of this series of books, given this system of penmanship some attention, and now we do not hesitate to say that we like it. There are many features that call for high praise. With these books it must be true that the study of penmanship can be made of some avail in every school: for the instructions are of such a nature that each teacher can have them all well in hand. We cannot take space to speak of the excellences in detail. The author will no doubt be glad to send specimen copies. They explain themselves.

Text-Book in Intellectual Philosophy. By G. T. CHAMPLIN, D.D. NEW YORK and CHICAGO. WOOLWORTH, AINSWORTH & CO.

240 pp. of this book contain the text; this is divided into chapters on Mind in General, Consciousness, Perception, Memory, Imagination, Conception, Judgment and Reasoning. Ten pages are devoted to explanatory notes, then about sixty pages contain questions on the text. The work is published in the usual excellent style of these publishers, and the present edition is new and greatly improved.

The Life of Trust: with an Introduction by FRANCIS WAYLAND. BOSTON: GOULD & LINCOLN.

At the first publication of this book about twenty years ago, it attracted considerable attention. It is the autobiography of George Muller, the founder of the "Orphan Houses" at Bristol, England. Mr. Muller, who is now about seventy years old, was a rather wild young man in his youth; but for the last forty years he has been very active in several departments of Christian work. His most important enterprises are Orphan Asylums, Bible and Tract Distribution, and Missionary Work. The peculiar feature of his work is that he never applies directly for aid to any one, but trusts for free-will gifts in answer to prayer. Chimerical as his plans may seem to many, the results are wonderful. He has received more than \$2,000,000 in money, he has built five large Orphan Houses, in which more than 2,000 orphans are cared for; and all, as he says, "without any one having been personally applied to for anything, and as the result of prayer to God." This is a new edition of the book, brought down to the present time. It contains pictures of the five Orphan Houses. The story is a most curious one; and the facts are astonishing, account for them as we may.

Manual of Bible Selections; by Mrs. S. B. PERRY. BOSTON: LEE & SHEPARD. 294 pp., cloth \$1.00; paper, with leather back, 60 cents.

This, as its name indicates, is simply a book of *selections* from the Bible; they are designed for all kinds of schools, including Sunday schools. Many of these selections treat of topics, and are made up of passages culled from various parts of the Bible. Some of the topics are "Charity," "Truth," "Patience," "Temperance," "Worship," "Trust," "Christmas," "New-Year," etc. Several exercises are arranged in the responsive form; and others still consist of a psalm or other portion of Scripture taken by itself. All the exercises are short; scarcely one will require ten minutes. The book pleases us; the arrangement evinces excellent taste, and a genuine love of the Scriptures; every lesson is a *gem*. No one can oppose the use of this book in school, unless he is opposed to the use of any part of the Bible, and in any form. We believe Sunday-Schools can make the book very useful; at least, we propose to experiment with it, and find out.

A Fair Saxon: A Novel. By JUSTIN MCCARTHY. New York, SHELDON & COMPANY. 468 pp., 12mo., cloth; price, \$1.50.

Monteith's Comprehensive Geography. A. S. BARNES & Co., New York and Chicago. 100 pp, quarto.

In the *SCHOOLMASTER* for November, 1872, we noticed this book on its first appearance. At that time, we commended several features, and pointed out some serious defects. The book before us is a new edition, retaining all the excellences of the first, together with some additional ones. Most of the defects that we mentioned have been corrected. Most of the Maps have been re engraved; and they are clear and distinct. We should hardly recommend the book to those schools whose pupils have time enough for something more complete; but, for pupils whose time is limited, we believe it will serve an excellent purpose. Its design is to present in *one* book the entire subject. We commend again its plan of showing the relative position, and the comparative size, of the different countries; we have never seen any book better in this respect. The system of map-drawing by a *uniform scale* is to be praised. The maps showing the surroundings of the large cities are a good feature. The tables and pronouncing vocabulary are pretty full, and, as far as we have examined, they are correct. The segments for constructing a globe are novel; and they will be useful to those who cannot otherwise obtain a globe. We think the book will be useful; and that it must meet with a good degree of favor.

The Critical Speller. A. S. BARNES & Co.

This is a blank book, ruled and headed for the spelling of words; of which it will contain 4000. Each page is ruled with a column for the number of the word, its prefix, its root, its suffix, its spelling with a brief definition, a sentence containing the word, and a column for errors. It is intended that the pupil shall make this a treasure-house of words; it is not designed to be used to write words in at the *time of a spelling exercise*. A faithful use of the book must be a great benefit.

Philosophy of Rhetoric. By JOHN BASCOM. WOOLWORTH, AINSWORTH & Co., NEW YORK and CHICAGO.

This well-bound book contains 251 pp. including the index. The preface is short and well put. The aims of the author are said to be "a Philosophy of Rhetoric, giv-

ing the principles as well as the rules on which excellence depends. The discussions present the mental and moral laws of influence. The work is chiefly designed for the "later years of collegiate instruction." Prof. Bascom has placed much in this volume of interest the general reader as well as the student. The chapter on Wit, Humor and Ridicule is entertaining as well as instructive.

BOOKS AND PAMPHLETS RECEIVED.

The School Stage. WILSON, HINKLE & Co.

Annual Report of the Department of Public Instruction of the City of Oshkosh, Wis., 1872. H. B. DALE, Superintendent.

English Literature and its place in popular education. By FRANCIS C. UNDERWOOD. Boston. LEE & SHEPARD.

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PERIODICALS.

The Massachusetts Teacher for September is one of the best educational journals that reached us during that month—best in this, that the articles in the body of the book are pointed; every one means something to the schoolmaster. Our appreciation of the editorial is well told by referring to our own pages to which we have transferred on article entire.

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NATURAL HISTORY IN THE PUBLIC SCHOOLS.

I wish to offer a few suggestions with regard to rational methods of teaching natural history, and to the means and instruments needed for applying those methods. As the method of a work is governed by its purpose, I cannot avoid a brief discussion of the advantages peculiar to the natural history studies, of the ends which we should place before ourselves in pursuing them.

Why do we study nature? Not because she is beautiful and beneficent, a revelation or an embodiment of the Divine; not for this only, or even chiefly, but because we see that we shall thus acquire for ourselves, and be prepared to make possible for others, a *culture* at once valuable and unique. The aesthetic, the poetical side of the study of natural history, has been perhaps too often dwelt upon; hence, many intelligent and earnest men have been led to look upon the analysis of flowers, the measuring of the angles of crystals, the patient study of the forms and markings of the valves of diatomaceae, with a scarcely concealed contempt. They can see no important relation between these pursuits and those questions of vital human interest which they believe to be the only worthy objects of manly thought and purpose. Nor is this to be wondered at. For it is true that we are confronted to-day by almost appalling problems, upon whose mastery depends the future of all civilized mankind. It is true that the best energies of the minds and hearts of all good men seem already too weak and slight for the labors which the age has imposed upon them; and it may seem almost criminal to call off any portion of the mental and moral power of the

intelligence and culture of this generation, to the study of the mouths of beetles or minute comparisons of the labial palpi of moths and butterflies. I can see how it is quite possible that the mere man of affairs may come to look upon the naturalist, not with indifference only, but with positive disapproval; and we can justify ourselves only because we can show that a training in natural science is *needful* to the full and symmetrical development of those powers of man upon which he must depend for victory over nature and over himself. If we *can* show this, we shall hoist our opponents with their own petard. Let us examine, then, more minutely the ground upon which we stand.

The observation and the judgment are among the most active of the mental faculties. We put them to use at almost every moment of every waking hour. The observing powers may well be likened to the circulatory apparatus of the body. As the impetuous torrent of the blood excites every portion of every organ to action and supplies the aliment which makes action possible, so the ceaseless, busy current of sensations which pours through the brain furnishes at once the material and the stimulant for all mental operations; and as contaminated or crudely manufactured blood deranges the whole body which it should support, so defective observation may vitiate nearly every process of the mind.

The senses furnish the *material* of nearly all original knowledge, which the mind, by its further activities, can only organize and apply. Such organization and application will of course be worse than useless if the material itself is unsound. We must guard ourselves against too low an estimate of the real worth of such original knowledge, as compared with that derived from the experience of others. One who analyzes, from day to day, the grounds of his actions and resolves, will often be surprised to find how small a part borrowed experience, the ready-made knowledge culled from books and the opinions of his fellows, really plays in the shaping of his life.

Furthermore, it is scarcely less *difficult*, perhaps often more so, to judge whether the experience of others is trustworthy and whether it is applicable in any given case, than it would be to acquire fresh knowledge for ourselves. It is simply a question of *convenience*. Our own experience must at least furnish the test to which we bring all else for trial; and if the test is unreliable, then nothing can be sure and sound.

Whatever relative importance attaches to the observing faculty as compared with the other mental powers, belongs likewise to those *studies* whose special purpose and effect it is to train this faculty. If it be said that we may trust the education of the senses to nature and necessity, I reply that the general experience is such as to induce habits of observation as pernicious as any that could well be conceived. Of the many errors to which the senses are liable, and which we must guard against by careful education, perhaps none is at once more prevalent and more fruitful of the gravest evil than that of insufficient observation. The common observation of things is so cursory and incomplete that our minds are filled with mere shadowy sketches, to which nothing in nature really corresponds and yet we habitually think and act as if nothing was more perfect and reliable. Very few indeed are able to see all that there is to see about so simple a thing as a blade of grass or the stamen of a rose. How immense a source of error, then, must be this lack of exhaustive observation where numerous complex objects are involved, as they are in nearly all matters of difficulty and importance. But imperfect observations regarded as complete, are worse than none at all. "Insist, insist ceaselessly" says Rousseau "that it is not ignorance but error that is dangerous." It is better to stand still a very long time than to walk over a precipice.

And this habit of *exhaustive observation*, so invaluable, so absolutely necessary to the highest practical success, is so rare as to be remarkable. To look at a thing on all sides, as a whole and in all its parts; to study the relations of the parts to the whole and to each other and of the whole to other wholes, similar or dissimilar; this requires a patient, thorough-going habit of mind which comes only of long and conscientious discipline. For such discipline nothing is more needful than some test or standard by which to *try* one's observations whether they have comprehended and exhausted all points, have fully covered all the ground. Such a test as this is found, in natural history, in the descriptions of genera and species. Sit down with an insect or a flower, observe it thoroughly, note every thing you see, and then, turning to the full technical description, see how many particulars you have omitted. If you are not a trained observer, you will probably find that from twenty-five to ninety-nine per cent. of the points worthy of notice have been overlooked. The importance of the frequent use of

some similar test in the regular class-room work, can scarcely be exaggerated. But to this point I refer again.

The peculiar value of the study of natural history for culture of the *memory* results from the fact that it has to do with *things* rather than *words*, that it accustoms the mind to grasp and retain exceedingly *complex* conceptions, cultivates, that is, a comprehensive habit of thought, and that its matter is held in memory by associations based upon purely natural relations.

It seems that the remembrance of the things we see is of hardly less importance, perhaps of greater, than that of the ideas we acquire at second hands. The nature of the mind is such that things seen or heard are usually much more easily recalled than things merely thought. The truths, the ideas, the emotions belonging to the past, while more important to us than the perceptions of material objects associated with them, are much less vividly impressed upon the memory. Hence, the reproduction of the former depends very often upon the distinctness with which the latter can be recollected; and by just so much as our own experience is, as we have seen, more valuable to us than the experience of others, is the remembrance of occurrences, of objects by which occurrences are held in memory, more important to us than the remembrance of acquired ideas. If we would frame an induction from all the facts of our experience bearing upon any given subject, we must be able to reproduce those facts readily and clearly; yet, in the ordinary studies of the schools, even in the natural sciences as commonly taught, no special attention whatever is paid to developing the power to recall to mind the objects of our past. That it needs such independent cultivation is certain from the fact to which I think all will testify, that the power of representing things and thoughts associated with things, is often in inverse ratio to the power of representing thoughts held rather by their associations with each other. The student who makes a daily nine in his Latin grammar and to whom the demonstrations of geometry are as clear as light, may be puzzled to tell you what happened on the day before yesterday; while the scenes and events of a week ago are already dim with the too quickly gathering darkness of the past. I am convinced that the painful lack of practical wisdom frequently noticed among men of the so-called scholarly habits of thought is often due to this inability vividly to reproduce and thorough-

ly reflect upon the details of their own past history. "He has all kinds of sense," men say, "but common sense."

The student of natural history, then, should be frequently required to describe minutely the objects of his past study. Extemporized examinations should be held, in which each student should be expected to write out or to give orally a full description of some plant previously analyzed, of some insect or other specimen with whose characteristics he has made himself acquainted; and the description thus obtained should be afterwards compared with the full description from the books or, better, with the specimen itself. This repeated, cautious verification of each step by the application to the student's work of some authoritative, perfect standard, is a point upon which we cannot insist too strongly. It will effectually guard him against haste, slovenliness or shallow conceit, constantly reminding him how hard a thing it is to see the truth, the whole truth and nothing but the truth. It will develop a fixed *habit* of exhaustive inquiry, almost the only practical safeguard against fatal error in the broad fields of social, religious and philosophical thought, where the judgments and the reasonings can be brought to no such exact and ready tests as these. Great care should be taken so to conduct this exercise; and, indeed, all others of the class, that mental reference shall be made to the objects themselves and not to the printed descriptions of them.

We must remember that it is one thing to know a great many plants or animals, and quite another thing to have a clear, well-ordered conception of the vegetable or the animal kingdom as a closely connected whole. By our ordinary methods of instruction, almost nothing is done to assist the mind to these complex conceptions, broad yet accurate and intricate. But for the teacher of natural history, nothing is easier. Given a knowledge of a number of allied species, let these species be studied together as members of the groups to which they belong. Let them be compared one with another, the resemblances which unite and the differences which separate them clearly noted, and there will arise in the mind a well-defined notion of the genus which they represent, as an aggregate of many varying individuals bound together by those common characteristics connoted by the generic name. When several kindred *genera* have thus been mastered, let *them* be studied in a similar manner with reference to their natural orders; and thus, reaching

on from the simple to the complex, the mental grasp is constantly enlarged, the mind is habituated to deal with conceptions at once wide in range and diversified in detail. I would again point out the fact, that such a training as this in thorough and exhaustive observation is the best possible preparation for a training in thorough and exhaustive thinking, that there is good reason to hope that the mental habits thus developed by the correct use of the senses will be carried on into the higher fields of *reason*, that the practice of holding in mind many and various related impressions, clearly perceiving their numerous and diversified relations, will make it comparatively easy to hold in mind many and various related *ideas*, and to perceive the general truths which they suggest. In short, I think this to be a sound principle, that all those operations which the mind in its higher modes of activity, is to perform upon thoughts, it should first to be taught to perform upon the perceptions and conceptions of material things. It is by a rational and simple process that the careful observer becomes the profound and accurate thinker.

There is another point of view from which I wish to examine this subject, as it has an important bearing upon methods of instruction. The act of comparison is one of the leading forms of mental activity. Comparison of sensations, preceptions, conceptions, emotions, thoughts and trains of thoughts, each with other and each with each, this constitutes a great part of our mental operations. Training of mind, therefore, is largely training in comparison, and is to be acquired only by practice of comparison. Such training, like all other educational processes, should commence with the simple and easy and proceed to the complex and difficult. Two simple and familiar objects, such as leaves or crystals, may serve at first; then a larger number or those more complex, as flowers, entire plants or animals. Later, the class might be required to point out the resemblances and differences of an object presented to-day and some other presented yesterday or last week, comparing, in this instance, object with conception; and soon they will be able to compare a specimen with the conception derived from the printed description of its species, to use, in fact, the synoptical tables for analysis.

I think that it is well worth while to give students practice in comparing conceptions with each other. I suggest only one method

out of several that may be used. The teacher may put into the hands of a student who is familiar with the methods of analysis an unknown specimen, to be described in writing and returned with its written description. After the lapse of a given interval, the species should be determined by the student by a comparison of his own description with the synoptical table.

We come now to speak of the necessary aids to instruction. If there is any one thing which has been constantly implied in all that has been said of the special intellectual advantages of the study of nature and of the methods by which those advantages may best be realized, that thing is the *necessity for specimens*.

How can the senses be cultivated, how can we educate our pupils to habits of exhaustive observation, unless *objects* be had upon which the senses may be exercised? How can we properly commence the training of the judgment, unless by a comparison of things and of concepts immediately derived from things? If we would convince our students that nothing is more needful, yet more difficult, than thoroughness and accuracy in all mental processes, where can we find clearer and more convincing proof of this than by applying to their work those tests which may be measured by the eye and appreciated by the dullest intellect? How otherwise can be obtained that special culture of the memory, which it is one of the most important offices of the study of natural history to impart, than by the careful scrutiny of objects and long practice in framing full and clear conceptions of them? By what other so easy and natural a route can we arrive at the power of abstract thinking, the ability to build up large inductions based upon numerous instances, as by this, of learning, through the study of related things, to construct broad and complex conceptions, embracing many simple ones united by very general resemblances? In short, what so fit a preparation for the art of thinking as the art of seeing? The objects of the natural world form the steps of the ladder by which the soul may climb from the abyss of mystery, in which it has its origin, to the sublime heights of thought.

It must here be observed that the especial value of natural history as a branch of study lies not so much in the knowledge as in the discipline acquired. It is not essential to the happiness, usefulness or success of the average man, that he should know the Latin name of the

garter-snake or be able to point out the natural relations of the South American ant-eater, or to describe the movements of the grains of chlorophyll in the hair-cells of the *Tradescantia Virginica*; but it is a matter of daily and hourly moment, to him and to mankind, that his ability to observe, to remember, to judge, to reason, should be developed to the highest degree of activity, power and reliability of which he has been made capable. This furnishes another and a very efficient reason why the study of nature should be chiefly directed, not to the text-books, where many facts can indeed be obtained, but to specimens, by whose use only the desired mental training can be achieved.

Another reason for the constant use of specimens is the interest, amounting often to enthusiasm, which it awakens in the class. I never knew a class of pupils to develop an enthusiasm for manuals of zoology or botany or for the most highly finished woodcuts of plants and animals; but the lively and absorbing pleasure which they will usually take in a direct study of natural objects often surprises the unaccustomed teacher and makes their instruction a recreation rather than a labor. There seems to be something approaching to an instinct in the common love of nature, an instinct rendered dormant, perhaps, in many cases, by a long-continued lack of the means of its gratification, but which springs into unexpected life under the stimulus of an intimate communion with the primeval sources of human inspiration.

A most pressing and important need, then, is that of school cabinets of specimens. Remembering that the field of study to be covered is simply immense, while the time to be given to it is very limited, and yet that any course which does not give the student an acquaintance with at least the leading families, will be too general to be of real value, we see that the collections need to be not large but carefully selected. They should consist of *representative* sets, containing named specimens of one or two species from each important family or other corresponding group or subdivision. These should be studied one by one until the distinguishing features of each section are clearly understood, and then fresh specimens, gathered by the class, may be determined by comparison with the named set. Afterwards, the analysis of specimens may be continued by means of the technical descriptions and the synopsis of genera, when these are to be had.

But how shall the schools obtain such representative sets of named

specimens? A knowledge of insects, of radiates, of mollusks, of crustaceans, is necessary to anything like a general view of the animal kingdom, for instance. But of radiates, none are within our reach; of mollusks, we have representatives of only a few families in our land and fresh water shells; of crustaceans, we have the crawfish and the wood lice only. Of insects, we have, it is true, a bewildering number and variety; but where are the teachers or pupils prepared to collect, preserve, name, select and arrange, correctly and judiciously, such sets as we have here described?

It is scarcely less difficult to *purchase* specimens, even if the first great difficulty be overcome, and the board of education be induced to make appropriations for this purpose. Such cabinets as are needed, are very rarely for sale; and, in any case, the teacher will not usually know where to look for them. If by chance he happens upon a seller, the small size of his order and his ignorance of the money-value of specimens will put him at every disadvantage. Moreover, as most collectors desire to sell their cabinets unbroken, there is not the required opportunity to select such material as is suited to the wants of any given school.

In short, not to continue further this enumeration of difficulties, the discouragements are so numerous and so great as to amount, in the great majority of cases, to an insurmountable obstacle.

I see but one way out of these embarrassments. Unless our public museums of natural history can be induced to undertake this work of providing selected cabinets of named specimens of such kinds as cannot be obtained or determined by individual teachers, I do not know how the teaching of natural history in the public schools is to be rescued from a near approach to failure. It is a work which these institutions are eminently fitted to do easily and thoroughly. Their advantages are as marked as are the disadvantages of the schools. In every active museum, collection, purchase, exchange and organization are constantly carried forward. The necessary books, instruments, etc., are already on hand. Duplicates accumulate or may be obtained, where lacking, at little additional trouble or expense. The officers of the museum "know the ropes," understand where to look for such things as are needed, and how to get them on the most favorable terms. They are also usually competent to classify speci-

mens, either directly or through correspondence with specialists, and they can secure and prepare collections for a score of schools at once with less difficulty than each separate school would encounter in attempting to supply itself unaided.

Further, such museums might be made exceedingly useful as centers of exchange. Specimens sent thither from all parts of the state might be worked up, selected and redistributed in such a manner as to give to every school participating in the work a cabinet illustrating the natural history of the entire state, as well as of its own immediate locality.

While speaking of the proper relations of museums to the public schools, I must refer to one other point. It is well understood that every teacher must know more than he is to teach. It will not be sufficient that he shall master his small school-room cabinet, and make himself familiar with one or two of the popular text-books. He needs opportunity for more thorough and extended study. Moreover, he needs, not less than the pupil, but rather more, that special mental discipline of which I have already spoken. For how shall he train his pupils to habits of accurate and comprehensive observation unless he has first thus trained himself? How can he cultivate in others the habit of correct and careful judgment, unless he himself has first acquired this habit? How, also, shall he test the conceptions of his pupils, unless his own conceptions are habitually definite and complete? What he should have, then, is not knowledge only, which it is an easy thing to get, but culture as well, to acquire which is far more difficult. I have already shown that this culture can only be obtained where the needed knowledge should also be chiefly sought, in those retreats where the eager student shall encounter nature face to face. This is one of the very needs which it is an important part of the purpose of the museum of natural history to supply. There all necessary books, specimens in abundance especially prepared for study, instruments, instructions, the needed aids and appliances of every kind, should be offered free for the use of every citizen of the state; while the parties which should be kept constantly in the field will give opportunity for any amount of practical out-door work the student may require.

Such are some of the benefits which a well ordered public mu-

seum should confer upon the teachers and pupils of the schools. But such museums do not spring at once into living, like Minerva from the brain of Jove, in full armor and equipment. They require, for their building up and maintenance, an amount of energetic and devoted labor which few persons realize. Neither is such a work as we have indicated one which does itself, or gets itself done. If the museums are to help the schools, the schools must also help them. What is needed is *co-operation*, a *union* of these two forces, upon some well-considered basis. There should be a mutual understanding between such museums in the state as are competent and ready to assist in this special work, and such principals and teachers as will give to it their personal aid and influence. In the work of *scientific education* it is certainly fit that *scientific men and educators* should unite and harmonize, should *organize*, in a word, for their mutual advantage. The two classes are natural allies, and indeed are largely identical; and the benefits of such an organization as I have here advocated would accrue to both. Not only would purely scientific investigation and discovery receive a much needed onward impulse, but we might reasonably hope to rescue the schools from that curse of superficial teaching which now threatens to make the popular study of natural history a scoffing and byword. And I think that I cannot better close these disconnected hints and jottings than in the words of Thos. H. Huxley: "I should look upon the day when every schoolmaster throughout this land was a center of genuine, however rudimentary, scientific knowledge, as an epoch in the history of the country. But let me entreat you to remember these my last words. Addressing myself to you as teachers, I would say, mere book-learning in physical science is a sham and a delusion. What you teach, unless you wish to be imposters, that you must first know, and real knowledge in science means personal acquaintance with the facts, be they few or many."

S. A. FORBES.

Character is more than scholarship: to be is better than to know.

HOW WE WENT TO WOOD ISLAND.

A VACATION PILGRIMAGE.

We were all, big and little, playing in the sand at Old Orchard Beach, away down in Maine, we big ones enjoying it fully as much as did Gun and Baby Trot. They were digging in the sand with their wooden shovels, "nine dig," Trotty called his; now scooping out wells into which the salt water oozed slowly, now piling the white sand up in mimic pyramids and fortifications, or loading it upon their carts and dumping it into the ocean, which, to their amazement, was never a whit the drier for all their labor. We helped them sometimes, but oftener lay lazily stretched on the sand. Oh! that beautiful sand; so soft, so white, so yielding. How, as we lay upon its bosom, did it seem to clasp us close, each touch, a caress. And right before us lay the sea. I had never imagined anything on earth so beautiful. The tide was coming in, a strong full-moon tide, surge after surge, surge after surge, breaking in pearly brightness at our feet. Beyond this rim of white lay the ocean, giving back in glory the tints of the sunset sky—jasper and sapphire and emerald, beryl and topaz and amethyst, till it seemed that before our very eyes were rising the foundations of Jerusalem the Golden. Now the moon came up, like "one great pearl," which made the city's gate. From this gate, a golden pathway gleamed, straight, narrow but intensely bright. The light had faded from the rest of the ocean and the sky, but in this moon-made pathway each object stood out with startling distinctness. Where before we had seen no speck on the ocean, was now a yacht, with her sails full spread, but standing motionless, as though carved out of silver; and beyond, a low-lying mass, like a bank of thunder-clouds.

"Oh! Wood Island! see Wood Island!" exclaimed Jule, pointing to my thunder-clouds, and so my dream was broken. "What is Wood Island," asked I, plunging into the prosaic with a shudder.

"It is the most beautiful place in the world: all rocks and canes and sea-shells and mosses and—and—clambakes," tumbling into the prosaic more rudely than I had done. "You must go there, Mary, if for nothing else, to learn the difference between a snail-shell

and a nautilus, you poor unsophisticated, prairie-born, you!" For I was not a bit sea-wise, and my greenness was a source of never ending fun to the rest. I was continually finding opals and amethysts among the pebbles; they were so beautiful as the tide left them, bright with its baptism, at my feet. I could not bear to tell them, "You are only good-for-nothing bits of rock;" so I tenderly carried them home, with the snail-shells, whose inner surface glowed with such a beautiful iridescence.

Shouts of laughter always greeted the unfolding of my treasures, for drying took all the brightness out of my gems, but neither the laughter nor the drying made the next tide's treasures seem one whit less beautiful to me. But now I was to see something really worthy of my ecstasies, for it was speedily arranged we should go to Wood Island to-morrow. I had a suspicion Jule's geography was at fault, when she talked of nautilus in Saco bay, but I wouldn't have hinted it for the world. Hadn't she spent any number of seasons at the seaside and didn't she know?

Well, the morning did come at last, in spite of our lying awake all night wishing for it, and now for Wood Island. Part of the company could not bear the motion of the sail-boat, so they were going to Saco to take the steamer for the Island, while we brave ones were going straight across in the yacht. Trotty might be afraid, so papa James took him with the steamer party, while ma-ma Myra went with us.

We were all ready at last, the steamer party starting first, unimpeded with dinner baskets or pails, for we relieved them of all *impedimenta*. Every thing looked favorable when they started, but fifteen minutes after we were on board the yacht, a blue mist came creeping up from the sea, and soon enveloped us, shutting out sight of land.

How delicately tinted it was, just like the one sure sea-view, which hangs on my study-wall at home. With what tenderness it enfolded us! and I went off into a dream whose foundation was the loving kindness of old ocean in thus sheltering us from the fierceness of the August sun.

But the rest, knowing old Neptune better than I did, had not much faith in his loving kindness. "It will spoil all our fun," said

Willie; "I'm afraid we can't make Wood Island in this fog," said our skipper, (I am not sure "skipper" is the right term to apply to our one-man-officer-and-crew of the yacht, but it has a sort of a salt sea smack, so I'll use it). "But we *must* make it," exclaimed Myra, "for what will become of James and that blessed baby and all the rest of them, for we've got all the dinner."

"There's fogs, and fogs," said Will, oracularly; and all commenced talking about rising fogs and falling fogs, we who knew nothing about it of course talking most learnedly; demonstrating to a mathematical certainty that this *must* be a rising fog.

Meanwhile skipper Charlie said nothing, but busied himself with his sails, occasionally giving us a comical look when we ventured a peculiarly weather-wise observation.

It would make our story sound more like a sea voyage if our skipper had talked sea-phrases and Hosea Biglowisms, but unfortunately, he didn't. Those Yankees have an absurd custom of sending everybody to school, and that spoiled our romance; Charlie talked as pure English, as the best of us; and as for looks—no man ever had more magnificent eyes. (I cannot, in all candor, charge the Yankee school-system with *that* however). Little good they did him now, those glorious orbs, for he could not see a boat's length ahead. But the wind was in our favor, we thought, though it did seem funny it should strike first one side of the sails, and then the other. However, we accorded that phenomena entirely to Charley's skill in "tackling," and went on our way rejoicing.

What wealth did we discover in the waters below us, as we peered into their depths! Strange uncanny creatures floated past us, with never a word to say—sea-cucumbers, and sea-urchins, fine-rayed starfish, periwinkles and the living raft of the violet-snail. There were beautiful sea-weeds, delicate filaments out spread; Iceland moss, white, lavender and brown; and sometimes long stretches of the devil's apron—plain green ones for every-day wear, brown ones elaborately embroidered for Sunday. Willie, just home from Harvard, declares it is not embroidery at all, only the work of borers and that he don't believe his Satanic Majesty cares enough for Sunday to don a clean apron; but then he don't know.

What cared we for the fog above, when the sea held such treas

ures beneath? We leaned far over the boat-side, trailing our arms in the water and delighting in the spray dashing over us. But soon we found it was not dashing as much as it ought, and we became conscious that our breeze was dying away. But we must be near Wood Island by this time, so we did not care. As the wind sunk, the fog rose, and disclosed—the Bay View House. Now the Bay View House is a pretty sight, but as it stands on the main land, in a direction at right angles to Wood Island, it was not a welcome sight to us then. Having lifted long enough to show us the situation, the fog settled and there was not a thimbleful of wind stirring; miles away lay Wood Island, with its treasures and the rest of our party, impatient for their dinner, for with all its resources it cannot get up even a clambake, unless its visitors bring the materials. Myra was in an agony about that blessed baby and his father, indeed we can none of us even to this day, think of their forlorn, dinnerless condition, without a shudder; and the boys declared they would row us there. They did row, like heroes; half an hour passed, an hour—we *must* be almost there; the fog lifted again, and again we saw the “Bay View.” People lost on our prairies usually travel in circles; I suppose it must be the same with people lost on the ocean in a fog. We could not help laughing, to save us, and in spite of blistered hands and strained shoulders, the boys joined in the chorus.

A third time we steered for that Island, and, would you believe it, a third time brought up at Bay View. “What next!” “Why, dinner,” answered Will, the practical.

While we ate, the fog rolled away in great fleecy masses, the sun shone out brilliantly and a stiff breeze sprung up; but it was dead ahead. “Its impossible to make the Island in the teeth of that wind,” said the skipper. “But we can sail *somewhere*,” said Will, and we did, trusting to the wind’s changing again to bring us back. We stopped at the beach and left Myra, too heart-sick at thought of dinnerless baby and husband to enjoy anything, and then went on, sailing over the waters all that golden afternoon, with the beauty of sea and sky filling our hearts to the exclusion of all else. There can be nothing more delightful than the motion of a sail-boat, bounding over the waves; a gallop over our prairies on a spirited horse comes nearest it, but even that is not so exhilarating.

I have no idea how big Saco bay is, but I know we sailed over its waters twelve blessed hours, and never reached its limits. And we never came any nearer Wood Island: indeed I have doubts of its existence. If there be such a place, surely some Prospero dwells there, none other could evoke such a combination of hindrances; calm and fog, perverse sunshine and shadow, bewitched arms of rowers and balking head winds, all combined to keep us from that island: to this day it remains a lost Atlantis to me. And this is how we went to Wood Island.

MARY ALLEN WEST.

DRAWING LESSONS.

I do not mean to abide in my present ignorance; but it is unfortunately true that I cannot delineate anything. If I had been the artist, Polonius would have been perfectly right in refusing to decide between the figure of a camel and that of a whale. Now, I apprehend that the SCHOOLMASTER has some readers who will take a personal interest in the question; what can such a teacher do towards instructing children in drawing? In the first place, he may do something towards seeing that they are provided with suitable material, particularly with blackboard surface. The doctrine, that a blackboard is a blackboard, is quite as popular as that other doctrine, that a school-house is a school-house, and almost as obnoxious. Many districts, which would not employ a stutterer to teach, compel every one who uses a crayon to commit faults equivalent to stuttering, by reason of the roughness and dinginess of the blackboards.

In the second place, the very blunders of the most ignorant teacher may often be a fruitful source of instruction to the class. My scholars have often caught me in the very act of learning, and I "ain't dead yet." There are plenty of things which I have lately learned, or which I have yet to learn, that are quite fit to be presented to children eight years old; and every teacher who interrogates his own consciousness will make the same confession. I do not pretend that a teacher who is simply his own oldest pupil is really an accomplished instructor, but he is a great deal better than none at all.

In the third place, I learned from my Latin Reader, long ago, that

elephants, when they cross a stream, put the little ones before. I tried such an experiment in a drawing exercise, with good success. I did not exercise any skill in drawing, myself, and was not called upon to exercise any. I invited the children to see who could draw a line just six inches in length. At first, nearly all held back; but there were a few volunteers, and all became interested in the results of the measurement. For half an hour, the attention was general, the training of hand and eye was all that I could have hoped, and I had nothing to do but to stand in judgment with a tape measure.

Once more: in many of our ungraded schools, where a teacher must do his work in a single winter and be gone, map-drawing may be made the first artistic work. It will afford the older pupils a relief from the drudgery of geography, and the younger ones will be ambitious to imitate them. I am jealous of the early use of triangulation, or of any other mechanism. If the pupil is shown the best method at first, and ordered to adopt it, he loses the valuable discipline that results from a comparison of different methods. But I do not admit that this oversight, or any other oversight, is fatal. We are so situated with reference to art, that very poor instruction is better than none.

J. T. MOULTON, JR.

NOTES ON SCHOOL MANAGEMENT.

The following notes are suggested by observations in various school-rooms, where the teachers were not all beginners.

A common cause of low utterance on the part of pupils, is the nearness of the pupil to the teacher. If a class is so placed that some of the members are near the teacher and others farther removed, the complaint that answers are not heard will chiefly be directed at those nearest the teacher. They naturally talk to be heard by the teacher, and if the teacher can so arrange that no part of the class shall be nearer to herself than to any member of the class, it will be a great gain in the ease of recitation. In case of the diffidence of the new-comer it may not be amiss to go nearer to the pupil who is not heard, with the suggestion to repeat what has been said, but the tendency of the pupil's voice will be downward as the teacher comes nearer.

Teachers sometimes fall into forms of giving directions that are not accurate, but through which their own pupils learn to understand them. When they pass to other teachers, the pupils sometimes are deemed dull or careless, when they are really trying faithfully to do as directed, thus a teacher called on a class to give the sounds of the letters. They knew that she meant the *vowel* sounds and they satisfied her by giving them. Another teacher called for the analysis of the words in the first line on a page. The class stopped at a pause in the midst of the second line. The teacher apologetically accepted it as correct, saying I meant you should go to the pause. In the minds of a visitor the question naturally arose, "then why did not you say so?"

Teachers who give out certain very brief lessons in geography, or in arithmetic, or in spelling, often pursue a course in recitation that tends to narrow the mental power of the pupils and to belittle their habits of study, instead of making the assigned lines so much additional matter for use with that already studied. Some teachers will call on pupils in succession till the assigned lesson is recited, when the next pupil is called on for the first item again, and so on, the repetition being kept up till the time of class expires. If a teacher does not feel that she can trust herself to develop broader interest in the subject by enlarging it from sources beyond the text-book in the hands of the pupil, she can at least make that book so far as already studied available; and when the day's lesson has been fairly recited, the rest of the time can be spent in a review from the first of the book. There is a wealth of instructive power in the pictures of most of the primary books. In the Institution for the Deaf and Dumb, the pictures of one of our primary geographies are regarded as more valuable for purposes of instruction than the text itself. The use of such pictures we shall have occasion to refer to again.

JAMES H. BLODGETT.

HOW SHALL I MAKE MY PUPILS GET THEIR LESSONS?

This question is repeated by teachers *ad infinitum*. Its repetition is of very frequent occurrence during the first year's experience; after that, the interrogatory is made less and less often until, when the professional teacher takes the place of the novice, the question is

asked no more. What does experience teach with regard to this part of the work? Why do young teachers so earnestly ask the question which so seldom appears to trouble their elders?

We are beginning to learn that all pupils should not be similarly treated, even though the old school discipline vigorously so taught. Each boy and each girl requires mental, moral and physical treatment, different from that of every other boy and girl. We ought to be able to apply this in each instance. This cannot be done, because, *first*, under such a *regime*, one teacher could instruct not more than twenty pupils, and, *second*, we do not know enough: by this I mean that the mass of teachers know less than any other class of people, of men and things about them, hence less of human nature. Then, the condition of things prevents the application of the true method of making boys and girls get their lessons, viz: Treat each one according to his individual character. In school as in the world, some must be coaxed and a few be driven; the first thing for the teacher to do is to distinguish these two kinds in her class.

One of the common methods of compulsion, is detaining the pupil after school hours. The results are, where the school sessions last six hours a day, vexation of pupil, impatience of teacher, and a general unhappiness of both. In some cases this is a good thing to do. A pupil will not be harmed by an hour's detention after school if his school day is but three hours. A lazy, lymphatic pupil will not be injured by detention in the school-room after school. Recesses should never be prohibited. But the general rule for both teacher and pupil, should be "leave the house when school is done."

You can keep a boy after school, but if he is a boy of spirit and persistence, he will not get his lesson. It is only the *good* boys that go to work with a will after school, and they are the very ones you do not care to detain.

Then if the pupils cannot be detained after school, how *shall* they be made to get their lessons? The answer has never been given. It cannot be given. There are duties of a teacher, the accomplishing of which requires an amount of ability, tact, force—call it what you will—the quality of which, though comprehended by results, cannot be described. It is this that will make the pupil get his lessons; it is this that makes school management relatively easy; it is God-given

not acquired; he who has it not, can never acquire it; he can but imitate.

As for the pupils, while parents remain as they are, it can not be expected that the child will ever learn tasks assigned him just because he loves the work; some other incentive to study must be found.

EVOG.

ARITHMETIC. IV.

In this article I propose to take up the subject of *Factors and their uses*, one of the most important departments of arithmetic; but it is usually treated very inadequately in our text-books. By turning to the first article of this series, in the January SCHOOLMASTER, it will be found that I there suggested certain exercises intended to lead the young pupil to a just conception of some of the first principles of numbers. In the catechism at the end of that article are the following questions and answers: How is each new number *regularly* made? *By putting one of the same kind with the last preceding number.* What is putting one number with another and naming the result called? *Addition.* How, then, are all numbers above *one* regularly made? *By a constant addition of one.*

Let us take the same class of pupils with their present advancement, and let them make the numbers in this regular manner, say as far as *six*. Now put together two and two and two of the same kind. Again we have made *six* by *constant addition*. Can five be made by the *constant addition* of any number other than one? Let the pupils try the experiment, using their counters. Then try the same thing with other numbers, as four, seven, eight, nine, etc. In this way, lead your pupils to discover that numbers are of *two* classes, namely such as can be made by the *constant addition* of one only, and such as can be made by the *constant addition* of some number other than one. Names are now wanted for these classes of numbers; they may be called respectively *prime* and *composite*; or other names may be used for a time. To insure rapidity and certainty in future work, it is important that the pupils commit thoroughly to memory all prime numbers below one hundred.

When I make six by the *constant addition* of two, what may I call the two in respect to the six? *A maker of six.* By what process may twos be used to make six? *By constant addition.* Instead of the English word *maker*, we will use the Latin word *factor*, which means exactly the same thing.

What then, is a factor of a number? *A maker of that number by constant addition.* To review, what is a prime number? *A number that can be made by the constant addition of one only.* What is a composite number? *A number that can be made by the constant addition of some number other than one.* What is that number called which makes another by *constant addition*? *A factor of that number.* Hereafter, instead of *constant addition*, we will say *multiplication*, which means the same thing; and we will call all numbers which can be made by this process of multiplication, *multiples*. What, then, is every composite number? *A multiple of each of its factors.* If I can build six of twos only, I can destroy six by constantly taking two away; I have called the first process, *multiplication*; the second is its opposite, or *division*. In the process of building, we called two a *factor*, in the opposite process, we may call two a *divisor*. What, then, is a divisor of any number? *A factor of that number.* This is true; and no other number can be a divisor; it is easy to show that *we never divide a number by anything but its factors.*

Lead the pupil to see that *every number is prime, or it is made up of prime factors into which it may be resolved.* The resolution of numbers into their prime factors is a very important process; and the pupil should practice it, until he can do the work with the greatest promptness and accuracy. It will be well, if he studies the numbers below one hundred, so that *at once* he can tell the factors of each; so, for instance, that seventy-eight may be to him, *two times three times thirteen*, just as readily as it is seven tens and eight units. But, before proceeding to the process of resolving numbers into their prime factors, it is important that we become thoroughly acquainted with certain tests for the presence of some of these factors in any given number. These tests rest upon two fundamental principles in numbers; these I will state and demonstrate, and then I will state and demonstrate the tests themselves. It is hardly necessary to say, however, that I do not propose these *demonstrations* as a part of the work to be given to young children.

PRINCIPLE I.—*A factor of any number is a factor of any multiple of that number.* Demonstration. It is given that there is a number having a factor; then, of course, that number is some number of times that factor. Hence, when I make a multiple of the given number, or take a certain number of times that number, I am taking a certain number of times the given factor, a certain number of times. Therefore, my result must be a certain number of times a certain number of times the given factor; and, of course, that factor must be found in the result. Illustration. Six is a number of which two is factor; six is three times two, or three twos. Hence, when I take five times six, for instance, I am taking three times two, or three twos, five times;

the result is five times three times, or fifteen times, two. So it is clear that two is a factor of the multiple.

PRINCIPLE II.—*A common factor of any two numbers is likewise a factor of their sum or their difference.* Demonstration. It is given that there are two numbers and that they have a common factor. Hence, each of these numbers is some number of times the common factor. But, to find the sum of these numbers, I put them together; in doing this, I am putting a number of times the common factor with a number of times the same factor; and it is clear that the result must be a number of times that factor. Again, when I find the difference of these numbers, I must take some number of times the common factor from a number of times the same factor; and it is clear that a number of times that factor is left. Illustrations. Let six and fourteen be the numbers, and two, the common factor; six is three twos and fourteen is seven twos. Hence, to find their sum I must put three twos with seven twos, and the result will be ten twos. Again, when I find the difference of these numbers, I take three twos from seven twos, and the result must be four twos.

It may be seen that, in all these cases, the given factor is treated just like the *unit* of which some number is made; as, for instance, the *apple* when dealing with a number of apples; and it is really no more difficult to understand the necessary presence of the given factor in *all* the above results, than it is to understand that the apple will always be the unit of the result obtained when we multiply, add or subtract numbers of apples. While I think it would not be wise to attempt to make young children give the above formal demonstrations, they may be taught to *illustrate* these principles in a variety of ways by the help of their counters, which ought not to be discarded for some time yet.

The tests and their demonstrations will receive attention in the next SCHOOLMASTER.

E. C. HEWETT.

Oct. 9, 1873.

Col. Eaton, commissioner of education, is studying the character and results of the kindergarten schools, preparatory to reporting what can be done towards caring for the little ones of our country while their hard-working parents are absent from home at daily toil. The trade, industrial and technical schools of Belgium, are also the object of his investigations. This report will be of much value. Illinois has not yet felt the need of such schools as much as the East. So far the establishment of night schools in our larger towns is all that has been done in this direction.

EDITORS' DEPARTMENT.

It seems plain enough that the teachers of a State, if they are wise, will not suffer themselves to be divided into factions warring with each other. The simplest dictates of common sense ought to teach them this truth. The whole educational corps of a State, constitute but one family, and their strength before the community depends very largely upon their presenting a united front. Petty jealousies and envies ought to have no existence among them. Their interests are all in common, and they have common enemies to contend with,—enemies strong enough to tax all their resources, so that they have no ammunition to waste on each other. To be sure, honest differences will arise among them: and, so long as teachers are human, it cannot be expected that they will be entirely free from the faults and the failings common to humanity. But nothing is gained, and much is lost, by parading their differences and their faults and failings, before the world. The condition of educational affairs in our own State is in our mind as we write these words. Our feelings would have prompted us, many times in the past year, to write for these pages, things concerning some of the fraternity, in which vinegar would have been a large ingredient. But what good end would they have served? We have held our,—pen; and we are glad of it.

Mr. E. W. Coy, for the past three years principal of the Model High School, is about to leave Illinois to assume charge of the Hughes High School of Cincinnati. By this movement our State loses one of its best teachers. The Board of Cincinnati have secured the services of a man who has no superior in high-school work in the country. It is with feelings of joy and sorrow that we bid adieu to Mr. Coy,—joy at the merited compliment which he has received,—sorrow that our own good State must lose his services. Our neighbors in Ohio will find in their new acquisition an able scholar and a modest man.

The boards of supervisors in the State are, under the new law, arranging the salaries of county officers. The instances below given are fair illustrations of what is generally doing in this direction. Macon county gives its clerk \$2,000, circuit clerk \$1,500, judge \$1,500, treasurer \$1,750, and allows its supt. fifty days for visiting schools or \$200.

Logan county gives its judge \$1,800, clerk, \$2,000, treasurer, \$2,000, supt. \$450. If this means anything, it means that first-rate

school-men must not occupy that office. The office that has almost direct control of more property of the county than all others together, that, in addition to this responsibility, controls and gives direction to the school system of the county, must be filled either by an incompetent, or by one who has some other business; that of looking after the school interests must be secondary. If our schools are worth maintaining, if they are good for anything as they are, it follows that an improvement in their management would render them better worth supporting. The grand reason assigned by the wise ones—that the superintendents were a useless expenditure to the county—for crippling the office, if valid, applies equally to the other county officers; so, when a judge or clerk shows himself to be incompetent, reduce the salary and so cripple the efficiency of the office that only he who has an income from other business can afford to give to this any part of his time. The SCHOOLMASTER would like to see the office abolished or made efficient. On its present basis it will seriously harm our schools.

The following list of zoological works is published for the benefit of such students as are not satisfied with the aid of the school textbooks.

- Baird's Mammals of North America*, J. B. Lippincott & Co., Philadelphia. \$20.
Cone's Key to North American Birds, Naturalists' Agency, Salem, Mass., \$7.
Packard's Guide to the Study of Insects, Naturalists' Agency, Salem, Mass., \$5.
Harris' Insects Injurious to Vegetation, Porter & Coates, Philadelphia, \$10.
Le Conte's Coleoptera of North America, Smithsonian Institution, Washington, \$1.50.
Morris' Synopsis of Lepidoptera of North America, Smithsonian Institution, \$2.
Hagen's Neuroptera of North America, Smithsonian Institution, Washington, \$2.
Loew & Oetlin, Sackin's Diptera of North America, Smithsonian Institution, \$6.
American Entomologist, 2 vols., R. P. Studley & Co., St. Louis, \$5.

Baird's Mammals includes all North American species, except the Bats and Cetaceans. The synopsis of birds in the United States is complete. The works of Harris and Packard are general in character, containing descriptions of only the most common and important species. The Smithsonian publications, of which none are yet complete, consist chiefly of descriptions of species, except Le Conte's Coleoptera which does not pass below genera.

Articles have appeared in the *Winona Republican* and *St. Paul Pioneer*, criticising very severely an article in the Sept. number of the *Minnesota Teacher*. The article was written by the editor, George M. Gage, Esq. Some of the critic's points are well taken; brother Gage's rhetoric was not perfect, but some of the critic's own sentences can be vastly improved. As one reads them, he is reminded of the old proverb about people who live in glass houses. To an outsider, it looks very much as though there is a *sizable* colored person in the fence, somewhere.

An old and valued correspondent seems troubled because we said in our last number, "if the majority establish schools such that any individual, sect or class cannot conscientiously use them, their remedy is to remove their children and educate them elsewhere at their own expense." Nevertheless, "all this we verily believe;" it is the result of much thought; and it is our deliberate conviction. We confess that to us it seems the only tenable position, if our public-school system is to continue in such a form as to give no one just cause of complaint. We do not care to argue the case here and now, but we stand ready to defend our proposition. Meanwhile, we are "open to conviction," and there is room in the pages of the *SCHOOLMASTER* for others to state and to defend their own views on the subject.

We have heard the following story of Dr. Lyman Beecher. At one time, some one attacked him most violently and unjustly through the public press; but he took no notice whatever of the affair. To a friend who urged him to reply, he told this story of his early experience. Returning home one moonlight evening in autumn, he found a small black-and-white animal in his path. In a thoughtless moment, he threw a large volume which he was carrying, at the intruder. And, said he, "The result was such that I have never since through it worth while to launch a quarto at a skunk."

Mr. Northrop in his new book, noticed in our Book Table, has an excellent article on the somewhat prevalent notion that our children are suffering severely from too much study, or rather the somewhat general belief that intellectual labor in itself is detrimental to health and long life. The present fallacy and uneasiness on the subject are due very largely to the lucubrations of *Bohemians*, that have appeared from time to time in the public prints. These reliable gentlemen proceed on the principle that the chief end of man, —at least if he writes for papers,—is to stir up a fuss, to make a sensation; and that it matters very little whether, in accomplishing his purpose, he lies or speaks the truth. We are quite sure our readers will thank us for the extract from Mr. Northrop's article, which we will give in the next number. We found it very difficult to bring the extract within reasonable limits.

We hope our readers will notice the mathematical article in this number, from the pen of Dr. Matteson. There are many curious things about the formula of Pythagoras, which he discusses. We have received a pamphlet on the same subject, from a friend in Ohio; we may give it some attention, hereafter.

With the controversy about the authorship of "Nothing to Wear," "Betsey and I are Out," "Beautiful Snow," etc., fresh in our minds, we hold our breath in expectation of what is to come concerning two articles that appeared in the October magazines. *The Atlantic Monthly*, and the *Galaxy*, each presents a story which in essential points is the same. To be sure, the scene of one is in Paris, and the other in New York. But, in both cases, a gentleman becomes infatuated with a supposed young woman who is a prominent performer in a "show," he writes to her, makes her costly presents, gets a reply, and finally discovers that the fair one is only "a great, lubberly boy;" and the curtain falls on a thoroughly disgusted individual. The question to be settled is, who is the original Jacobs?

The entrance of the colored pupils upon the rights and privileges of the public schools of Springfield, is creating some argument in the papers of that city. It is rather late to raise such an issue. The editor of the *Weekly Journal*, in the extract quoted below, states the whole thing in a nutshell. A volume could do no more. It is commended to the attention of any other cities of our state that may have any hesitation in acting in the matter.

I. The Constitution of the United States declares that "all persons born or naturalized in the United States, and subject to the jurisdiction thereof, *are citizens of the United States and of the State where they reside*;" and that "no State shall make or enforce any law *which shall abridge the privileges or immunities of citizens of the United States.*"

II. The Constitution of the State of Illinois demands that "the General Assembly shall provide A THOROUGH SYSTEM OF FREE SCHOOLS, WHEREBY ALL THE CHILDREN OF THIS STATE MAY RECEIVE A GOOD COMMON SCHOOL EDUCATION."

III. The Free School System of Illinois, conforming to the requirements of the Constitutions of the State and of the United States, has abolished all distinction between the white and colored children of the State by expressly repealing the word "white" wherever it heretofore occurred in the School Law.

IV. The special act giving the control of the free schools of the City of Springfield to its own Board of Education, expressly makes those schools "subject to the general provisions of the School Law."

V. The members of the Board of Education of Springfield, before entering upon their duties, were required by the terms of the act, to "take an oath to support the Constitution of the United States and of the State of Illinois."

MATHEMATICAL.

MR. EDITOR:—Here, in a nut-shell, is the proof of my assertion in the second paragraph of my solution of $h^2 = b^2 + p^2$, in September number of the SCHOOLMASTER.

I showed in that discussion that $h = m^2 + n^2$, $b = m^2 - n^2$, and $p = 2mn$. Then, $h + p = m^2 + n^2 + 2mn = (m + n)^2$, also, $h - p = m^2 + n^2 - 2mn = (m - n)^2$, and

$(m^2 + n^2 + 2mn)(m^2 + n^2 - 2mn) = (m^2 - n^2)^2$. This proves my theorem that, "Both the sum and the difference of the hypotenuse and one of the legs of any right, rectilinear triangle are squares; and the product of said sum and difference is equal to the square of the other leg."

Illustrations: If $m = 2$, $n = 1$; then $h = 5$, $b = 3$, and $p = 4$. Hence, $h + p = 9$, a square; $h - p = 1$, a square; and $9 \times 1 =$ a square. If $m = 3$, $n = 2$, then $h = 13$, $b = 5$, and $p = 12$; now, $h + p = 25$, $h - p = 1$, and $(h + p)(h - p) = 25$: all the results being squares. Again, take $m = 3$, $n = 1$, then $h = 10$, $b = 8$, and $p = 6$. Hence, $h + p = 16$, $h - p = 4$, and $(h + p)(h - p) = 64$: all squares as before.

If we divide 10, 8, and 6, each by 2, we see that b and p interchange; that is, they exchange their value as shown when $m = 2$ and $n = 1$. There are two sets of values for m and n which will produce the same right triangle, as shown in the previous discussion.

DE KALB, ILL., Oct. 9, 1872.

J. M.

SCHOOLMASTER:—In the "mathematical corner" of your October No., I find the following:

"Problem I. Given the equation $x + 6\sqrt{x} = 91$ to determine the value of x .

Solution. Squaring we have $(x - 91)^2 = 36x$; $x^2 - 218x = -8281$. Whence $x = 49$ or $x = 169$. But this latter value does not satisfy the given equation. Why did we obtain a *wrong* answer. Give the true solution of the given equation." This latter value *does* satisfy the equation, if you take the corresponding value of \sqrt{x} , which is -13 ; hence, you did not obtain a *wrong* answer. A better solution would develop the values of \sqrt{x} ; thus, completing the square, we have $x + 6\sqrt{x} + 9 = 100$.

Whence $\sqrt{x} = 7$, $x = 49$, or $\sqrt{x} = -13$, $x = 169$.

Permit me to give you a problem:

$$x^2 + y = 18$$

$$y^2 + x = 8 \text{ to find the values of } x \text{ and } y.$$

EWING, ILL., Oct. 7th.

JOHN WASHBURN.

EDUCATIONAL INTELLIGENCE.

REPORT OF ATTENDANCE FOR SEPTEMBER, 1873.

	No Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
St. Louis, Mo.*.....	36,867	200	23,002	21,111	92	27,151	.....	W. T. Harris.
Chicago, Ill.....	33,612	20	30,929	29,438	95-2	71,040	.....	J. L. Pickard.
Cincinnati, O.....	22,852	15	21,347	20,918	98	2,815	.....	John Hancock.
Springfield, Ill.....	2149	.....	2042	1965	96-7	161	.....	Andrew M. Brooks.
Decatur, Ill.....	1677	20	1655	1491	96	261	858	E. A. Gastman.
Rock Island, Ill.....	1275	17	1141	1095	96	96	568	J. F. Everett
Freeport, Ill.....	1160	18	1096	1046	95-5	185	.....	Charles C. Snyder.
Alton, Ill.....	973	20	820	772	92	242	318	E. A. Haight.
East Denver, Colorado..	921	23	730	671	91-9	457	242	F. C. Garbutt.
Lincoln, Ill.....	783	18	646	570	88	405	171	L. T. Regan.
W. Rockford, Ill.....	770	18	723	669	93	148	256	J. H. Blodgett.
Macomb, Ill.....	673	20	625	603	96-4	52	401	Matthew Andrews.
Princeton, Ill.....	600	22	515	490	94	71	184	C. P. Snow.
Shelbyville, Ill.....	577	20	517	467	90	81	229	Jephthah Hobbs.
Dixon, Ill.....	501	20	452	413	91	422	87	E. C. Smith.
Polo, Ill.....	492	18	437	411	94	23	206	J. H. Freeman.
Marengo, Iowa.....	449	18	402	377	93-8	33	199	C. P. Rogers.
Saunder, Ill.....	431	20	374	347	90-2	70	118	A. E. Bourne.
East Mendota, Ill.....	395	22	368	347	94-3	87	105	J. R. McGregor.
Albia, Iowa.....	394	20	379	366	96-7	14	216	Cyrus Cook.
Rochelle, Ill.....	380	20	357	338	94-7	23	154	P. R. Walker.
W. Mattoon, Ill.....	356	22	338	321	94-9	.....	.....	Wm. H. Lanning.
Mt. Carroll, Ill.....	356	20	315	278	88	347	49	S. C. Cotton.
Delavan, Ill.....	351	22	.....	.....	.....	244	115	J. S. McClung.
Carrollton, Ill.....	348	22	334	314	94	80	147	E. A. Doolittle.
Washington, Ill.....	344	20	315	307	97-6	267	93	R. B. Welch.
E. Champaign, Ill.....	321	7	280	264	94-3	29	242	M. Waters.
Lexington, Ill.....	323	19	297	290	93	350	74	Daniel J. Poor.
Escanaba Michigan.....	318	20	.....	254	.....	87	120	N. E. Leach.
S. Belvidere, Ill.....	315	22	275	257	93-4	48	.....	J. W. Gibson.
N. Belvidere, Ill.....	280	15	260	245	94	16	162	H. J. Sherill.
DeKalb, Ill.....	262	16	247	227	92	49	73	Etta S. Dunbar.
Blue Island, Ill.....	225	20	218	210	96	12	183	M. L. Seymour.
Martinsville, Ill.....	224	22	163	153	93-8	46	24	C. M. Johnson.
Lyndon, Ill.....	149	20	126	104	82	56	17	O. M. Cray.

*For the year.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

FRIEND GOVE:—Does a "session" mean all day or a half of a day. Some are marking reports on the basis of a "session" as including all day, so a pupil might be absent half of the time and no showing for it in report.

Half a day.—ED.

H. J.

ILLINOIS.

Princeton.—The High School building is delightfully located a little back from the busy part of the city, surrounded by ample grounds, beautifully planned and beautified by trees, shrubs and flowers. The superior privileges granted to this school are sure evidences of culture and refinement in the inhabitants of Princeton.

The Summer Institute originated, and was conducted by H. L. Boltwood, Principal of High School Princeton, and C. P. Hall, assistant in same school.

About fifty teachers were present at the opening session; the number steadily increased during the three weeks. Two classes were formed, one for State Certificates,

the other for those who wished to give their attention to the sciences required by law in our public schools. The recitations were conducted in form of a school drill. The classes had the benefit of a large reference library, cabinets and apparatus, all of which are the property of that school.

There are persons who cause us to think more and better of humanity; they themselves are so strong in all that is good and noble, that their presence even, has an elevating influence;—such was the spirit of our instructors at Princeton. Their earnestness and zeal, their noble self-forgetfulness and devotion to their work, were a lesson each must have carried to his field of labor; it is among the choice blessings of life that we are permitted the acquaintance of such teachers as H. L. Boltwood and C. P. Hall.

ANNIE A. MEYER.

Champaign.—Mr. J. C. Oliver has gone to Santa Barbara, California. Prof. Cary, of the I. I. U., takes the west-side schools; Mr. M. Waters, the east side; Mr. P. M. Moore, takes Mr. Waters' place at Arcola.

McLean County.—*Museum at Normal.*—During the past summer about 6,000 specimens have been added to the museum of the State Normal University, exclusive of a good collection of diatoms, and a large invoice of marine specimens now arriving. About 600 of these have been obtained by purchase, donation and exchange; the remainder have been collected by the curator.

The preparation of cabinets for distribution to public high schools will soon be commenced.

Springfield.—Springfield has a sensation. The school board has stricken the word "white" out of the regulations, and thrown open the doors of the public schools to applicants of every variety of color from *mauve* to jet black. The *Register* is reported as greatly troubled thereat, and there are rumors that the *haut monde* will withdraw its children.

Martinsville.—Schools opened in good condition Sept. 1st. The attendance is greater than at the opening month last year. One of the best small school-houses in the State is here. Four teachers are employed at an aggregate monthly salary of two hundred dollars. Martinsville is a busy growing little town, and by proper means a first-class graded school can be permanently established.

Decatur High-School Grounds.—Our public buildings are public property, and every citizen should feel an interest in their condition, and a just pride in having them present an inviting appearance, by having the grounds surrounding them tastefully arranged and well kept. We call attention to our High-School Grounds, as furnishing a specimen of good taste in their arrangement, and of the best care in the fine condition in which they have been kept. In these grounds are flowers of almost every variety, tastefully arranged in beds, which bloom in their season, and contribute much to the beauty of the place. One fact specially worthy of note, as indicating the excellent discipline of the school, and the good behavior of the pupils, is that though the flowers and shrubbery surrounding the building are in the play grounds, where the scholars have access to them every day during recess, there is not the least sign of their having been disturbed in any way. This fact of itself speaks volumes for the boys and girls, and is worthy of special mention. The laying out of the grounds and planting of flowers and

shrubbery has been done under the direction of Mr. Gastman, who has also expended no small amount of personal labor in bringing matters to their present state of perfection. Great credit is due him for the good taste he has displayed, and the constant care he has exercised in the matter. No man could have manifested a deeper interest in beautifying his own estate, than has Mr. Gastman in giving the High School Grounds an inviting appearance. The same interest and care seems to prevail with the entire corps of assistants, and as we have already indicated, the pupils partake of the same feeling. We call attention to this matter that parents may appreciate the excellence of the influence under which their children are receiving their education, and realize that when they are at school they are not only prosecuting their studies, but that they are doing so under influences and in the midst of surroundings which are every way elevating and refining.—*Republican*.

Chicago.—Mr. James H. Broomell, principal of one of the Chicago public schools, was temporarily suspended by the President of the Board of Education, by and with the advice of Supt. Pickard, and Mr. Stone committee for the school of which Mr. Broomell was principal. We take pleasure in printing Mr. Broomell's manly and complete defense, as contained in his explanatory letter to the Board. From the published report of the affair, it is not easy to see the propriety of making so much ado over the matter, unless the Chicago Board are seeking a reputation for their schools based upon the slender foundation of the total abolition of corporal punishment, and the expulsion of all bad boys from school into the highways of their great city.

CHICAGO, Oct. 13th, 1873.

To the Hon. W. H. King, President, etc.

DEAR SIR: I am in receipt of yours of the 11th inst., suspending me from the position of Principal of Cottage Grove School for alleged cruelty in punishing a scholar in my school with a rawhide.

As I am informed, the subject will probably come before the next meeting of the Board of Education, and believing that the board will be disposed to hear both sides of the question at issue, and to weigh all the facts in the case before taking action, I have concluded to submit a candid statement of the matter as it presents itself to my mind.

On Tuesday afternoon, Oct. 7th, Oscar Woodruff was sent to my office by his teacher for serious and continued misdemeanors in the school. She had previously informed me that she was having much trouble with him, and that she feared it would be necessary to suspend him: also, that she had several times written to his parents in regard to his conduct without receiving any reply in reference to it, either in person or by letter, and without effecting any improvement in his deportment. I heard that his father was away from home most of the time, and that his mother had been an invalid for several months. I believed at the time that the administration of moderate punishment was the best thing I could do for the boy. Five blows in all were struck, none of them heavy. By throwing up his arm the boy received part of the force of one blow upon one cheek, which left a mark for the time. But for this slight accident the punishment would have been mild, as it was intended to be. The instrument used was a light, slender, rawhide, about twenty-two inches long. These are the simple facts in the case.

I will briefly rehearse what seem to me to be the palliating circumstances:

1. The boy was persistently disobedient and disorderly. The mother had been informed of this, and no improvement had resulted. The father was away from the city and could not be reached. I thought it better to punish the boy than to suspend him and send him into the street.

2. In the absence of any legislation by your board in the matter of corporal punishment, I was not aware that I would violate any rule by using it. I reported the case to the Superintendent, as was the custom in years past, and did so at once on account of the accident referred to.

3. Although I knew the Superintendent *desired* the schools to be conducted without the use of corporal punishment, I believed it still left optional with the principals to use it when they were conscientiously convinced that it was the best thing to do. On reporting the case to the Superintendent he expressed surprise that I had resorted to this method of discipline without first consulting him. This I most certainly would have done had I understood that such was his desire.

4. Since the language used in your letter indicates that my offense partly consists in the simple use of the instrument named, I deem it proper to say that I have the impression, growing out of frequent consultations on modes of discipline, with other principals, that the use of a similar instrument has not been infrequent, in times past, among the most successful of your teachers. My idea is, that the cruelty of a punishment depends upon the manner of it, and not upon the instrument used. That the punishment in this case was not severe, is attested by the fact that no complaint has been made of any marks upon the boy's form, except the one resulting from the accident, and this wholly disappeared within a short time.

5. I most positively disclaim any intention of acting arbitrarily in the matter, or of compromising any one connected with our schools.

In conclusion, I deem it my duty to all parties concerned to express my regret at having made what proved to be an unfortunate choice of discipline in this case, and to say, emphatically, that whatever my private opinion may be as to the advantages of corporal punishment in some cases, my intention is, and always has been, to observe strictly the rules of your board and the instructions of the Superintendent.

Respectfully,

J. H. BROOMELL.

Perry County.—The DuQuoin public school opened on the first Monday in October, with the following corps of teachers, viz: High school, John Ward; 1st Grammar department, Rev. E. C. Willoughby; 2d Grammar department, Miss E. N. Cotter; 1st Intermediate department, Miss M. Cowens; 2d Intermediate department, Miss Eva De Lano; 1st Primary department, Miss Mary Cole; 2d Primary department, Miss Carrie Kelley; Colored school, Mr. McPherson; To fill vacancies, Miss Alice Bayless; Teacher of German, Prof. McCord; Superintendent, Granville T. Foster.

After the 15th of Nov., public lectures on the Natural Sciences will be given once every week, in the school building, by gentlemen at home and from abroad. The present "Board of Education" are endeavoring to make this one of the best schools in southern Illinois.

INDIANA.—We have received from President W. A. Jones, the catalogue of the Indiana Normal School, at Terre Haute, for 1872-73. The summary of attendance is as follows:

No. of pupils in Primary Model School,	72
No. of pupils in Intermediate Model School,	56
No. of pupils in Normal School,	228

Total,.....356

Number of teachers in the faculty, twelve; of this number, seven are men. The pamphlet contains a pretty full outline of the course of study.

Pres. Jones gives some capital reasons why the work of the Normal Schools is not now, and ought not to be, simply instruction and training in "the theory and practice of teaching." His words are clear and well considered; and to our mind, they are not easily answered.

MISSOURI.—*Hannibal.*—Our first month's work closed Sept. 26th. The superintendent's report shows an enrollment of 1261, over 200 more than for the corresponding month of last year. The per cent. of attendance was ninety.

A Principals' meeting has been organized at which the subjects of Tardiness and Order have been discussed. The purpose of these discussions has been to secure uniform action on the part of all the teachers, to reduce the number of cases of tardiness in the schools, and the adoption of plans for securing better order, both in the school-room and on the play-ground. The result has been a reduction in the amount of tardiness fifty per cent., and a general improvement in the order of the schools.

Monthly Teachers' meetings are held. Corporal punishment was discussed at the last meeting, and the discussion will be continued at the next. From the present indications, the youth of Hannibal, will have less to fear from the stinging rod in the future, although its use may not be wholly abolished.

Prof. James Johonnot, principal of the South Missouri State Normal School at Warrensburg, has eleven assistants.

Query.—A correspondent writes that his Philosophy says that "the momentum of a moving body is equal to the weight multiplied by the velocity; while the striking force of a moving body is equal to the weight multiplied by the *square* of the velocity." He is puzzled, and asks us to aid him in his difficulty.

First, we remark that momentum is never a multiple of *dead weight*; the unit of momentum is *the moving force of one unit of matter moving over one unit of distance in a unit of time*. Hence, 15 lbs. moving 4 feet per second will move with 60 times the force of 1 lb. moving 1 foot per second; of course, for the same body, the moving force will be in proportion to the velocity. In these cases, no obstructions to the motion are considered; the result is the theoretical result supposing the body to move freely in a vacuum. Second, when however, a body is kept in constant, uniform motion *against resistances*, the momentum takes the name of *vis viva*, or living force; and this is in proportion to the *square* of the velocity. The reason is plain, and may be illustrated as follows: Supposing a body to move against the air, for instance, two miles; if the same body be moved four miles, twice as much air must be pushed aside, and twice as much force must be used; but, if the four miles is to be passed in the same time as two were passed, the opposing air must be pushed aside twice as *fast* as before, hence the force must be again doubled.

PERSONALS.—ADOLPH A. SUPPGER is the republican candidate for Superintendent in Madison county.

JOHN H. BLACK is nominated for Superintendent by the democrats of Adams county.

A. W. DURLEY, present County Superintendent, is candidate for County Treasurer, in Putnam county.

MISS MARY A. WEST, of Galesburg, has received the nomination of one of the parties for Superintendent of Knox county.

J. LAWSON WRIGHT of the Normal class of '73, has the charge of schools at Adaline, Ill.

MISS EMMA W. WARNE of Normal class of '73, is at DeKalb with MISS DUNBAR.

R. B. WELCH is at Washington, Ill.

M. H. AMBROSE is principal of Avalon Academy, at Avalon, Livingston county, Missouri.

CHARLES SPIES is at the head of St. Jacobs, public school.

J. M. DICKSON is superintendent at Hillsboro.

G. W. PARKINSON is teaching at Summerfield.

J. C. PICKARD has been made Prof. of Eng. Lit., in I. I. University, at Champaign.

ILLINOIS NORMAL.

GOV. BEVERIDGE visited the Normal on Friday, the 26th of Sept. All the schools gathered in the large hall, where speeches of welcome to the Governor were made by I. Eddy Brown and Miss Dell Cook. The Governor replied in fitting terms; advising and encouraging the pupils in a short speech. General Moore, of Decatur, followed in a short address, containing both fun and sense. A Reception to the Governor was held at the Orphans' Home in the evening; many prominent citizens of Normal and Bloomington, were present.

HON. SCHUYLER COLFAX, paid the Normal a short visit about the 1st of October.

PROF. COY has "a call" to the Hughes High School of Cincinnati. The present prospect is that he will go, for which we cannot blame him, as the position is an attractive one, and the proposed salary largely in excess of what he is now receiving.

PRESIDENT EDWARDS has not availed himself of the vacation offered by the Board last summer. His health seems much improved, and he will probably continue at his post.

The state of affairs at the Normal is altogether prosperous; the health of the pupils is more than usually good; and the daily work goes on quietly but vigorously. Section A, are "wrestling" with Mechanical Powers. Section C, are *conscious* that Psychology is not as easy to read as a novel; and the new Sections are drawing South America,—the drawings are mostly *prizes*, but there is an occasional *blank*. Several pupils who were here at the beginning of the term have gone out to teach. Mr. James E. Willis of the senior class, has been obliged to leave on account of death in his father's family. His absence is much regretted. The President is giving special attention to the oversight of students teaching in the Model School; as a consequence, their work is better than ever before. PROF. BAKER is preaching on Sundays at Danvers. MR. JOHN L. SHEARER, who is teaching in Madison county, saved one of his little pupils from drowning the other day. A little girl seven years old, attempting to draw water from the well, lost her balance and fell in, but the prompt action of the teacher rescued her.

MARRIED:—In Fall River, Mass., Sept. 25th, MR. JESSE B. SUTTON of Quincy, Mich., to MISS MYRA A. OSBAND. The bride's many friends wish they may "live long and prosper."

JUDD M. FISK will teach at Ipaava, the next five months.

J. E. LAMB is teaching at Washburn.

E. E. R. KIMBROUGH has charge of the schools in Golconda, Pope county.

R. H. BEGGS continues another year in Virginia, Cass county.

JOSEPH DOBBIN is Principal of the schools in Griggsville.

EMILY H. COTTON and OLIVE A. RIDER, are teaching in the schools of Griggsville.

J. W. LOWDERMILK is teaching in Franklin, Morgan county; the *Waverly Times* speaks well of his success thus far.

BOOK TABLE.

Smellie's Philosophy of Natural History, revised and edited by DR. JOHN WARE. THOMPSON, BIGELOW & BROWN, Boston.

This work has been before the public so long that its merits are too well known to require any extended notice. The book was first published by Mr. Smellie, near the close of the last century. This revision of the work by Dr. Ware has been undertaken in order to adapt it more perfectly to the present needs of the schools. It is not intended for a text-book in natural history, technically speaking "but to present such views of it as would be intelligible to the young student and to the general reader, and prepare them for, and lead them to engage in, a more extended study of the subject as it is presented in treatises more strictly scientific and in the works of nature." The introduction, consisting of one hundred and thirty-six pages, treats of the characteristics of living bodies, and of animals as distinguished from plants; of the structure of animals and of the general divisions and subdivisions of the animal kingdom with a description of the different branches and classes. The remainder of the book, containing over two hundred and eighty pages, is filled with interesting matter on various subjects connected with animal life, such as the voice of animals, and their modes of communication, their covering and migration, their habitations, artifices, education, hostilities, etc. It is a book that should be in the hands of every teacher of natural history, and we have found it a very profitable, as well as entertaining, text-book for classes in this interesting branch of study.

A Manual of Moral Philosophy for Colleges and High Schools, by ANDREW P. PEABODY, D. D., LL.D. A. S. BARNES & Co., New York and Chicago.

This neat volume of 220 pp., the author informs us, was "prepared particularly, for the use of the Freshman class in Harvard College." It seems to us, however, not too difficult for the pupils of ordinary High Schools, or even for the highest classes in some of our best country schools. Dr. Peabody bases morality on the "fitness of things;" he says, "*Fitness* is the only standard by which we regard our own actions or the actions of others as good or evil,—by which we justify or condemn ourselves or others." Fitness however, as he explains and uses it, has a broader meaning than some have been accustomed to give it. He does not dwell very largely upon Revelation as a source of authority, but often refers to it, and always recognizes it as such. He puts prominent the idea that *right* and *wrong* are inherent and inconvertible qualities. "We would have the youth from the very earliest period of his moral agency, grounded in the belief that right and wrong are immutable,—that they have no localities, no meridians,—that, with a change of surroundings, their conditions and laws vary as little as do those of planetary or stellar motion," p. 220. The book has a pretty full index.

Patterson's Speller and Analyzer accompanied by an *Exercise Book*. SHELDON & Co., New York.

This Speller, containing 128 pp., seems to be excellently well adapted to its purpose. It contains a very large number of words, well arranged on the whole, together with all the rules for spelling that are of any practical value. There is a pretty full list of prefixes and suffixes, with words containing them. There are also groups of words derived from different languages, some of the most common scientific terms, many geographical names, proper names of persons, abbreviations, a pretty full list of foreign phrases, groups of miscellaneous words, and groups of words selected from the other

groups. There are also a large number of dictation exercises, some of which are designed to teach the differences of words having similar sound or meaning; this is a very useful feature. One of the most serious defects of the book is that there is no guide to pronunciation except the marking of the accent. Some of the Latin words are written in Italics; we think it would have been better to mark *all foreign* words in this, or in some other way. We have noticed a few mistakes. We know of no authority for spelling *violincello*, nor for the pronunciation *Modena*. If "Then pressed the Monarch's signet ring" is intended as a quotation from Halleck's Marco Bozzaris, then it is a mistake.

The Exercise Book is intended for the writing of words from dictation; spaces are arranged and numbered in columns of twenty-five. There is provision for 192 such lessons, besides about 14 pp. of appendix, designed for corrected words. The paper seems to be very good. The book also contains valuable suggestions and directions for conducting such exercises. It would seem, to judge from the new spellers issuing from the press, that the present disgraceful spelling of pupils is not to continue for another generation. So may it be.

Physical Geography, by ARNOLD GUYOT. SCRIBNER, ARMSTRONG & Co., New York. Large quarto, 124 pp.

We have here a book that must receive much attention; it is a masterly work by a master hand. We have nowhere seen a school-book on this subject that has so wide a range as this; and, of course, it is no mere compilation, but the production of an authority that has probably no living rival in this department. The whole work consists of five parts, as follows, Part I.—The Earth; Part II.—The Land; Part III.—The Water; Part IV.—The Atmosphere; Part V.—Life upon the Earth. In part I, he treats of the earth as a planet in the solar system, as a globe, and as exhibiting the action of internal forces in volcanoes and earthquakes. In this last particular, his work is very full and valuable. In part II, he treats of the forms and structure of the several continents and islands, and of the *general laws* of land-forms. In part III, he treats of the drainage of the several continents, and of the oceans and ocean-movements. In part IV, he treats of climate including temperature, winds, rains, and storms, snows and glaciers. In part V, he gives the general facts of vegetable and animal life as modified by elevation, climate, etc., the animals and plants of the several continents, the relations of man to nature, man in his types, occupations, development and history. He strenuously advocates a common origin of the human family. From this very brief outline, it will be seen that here is a rich field for the student.

We particularize the following points of excellence. The paper is good, and the print large and clear. The complete analyses must be very helpful in fixing the matter in the memory. The rich and varied illustrations we can hardly praise too highly. There are no less than six double-page maps, and smaller maps and diagrams in great number. The pictures are all fresh and instructive; those on page 102 and 106 are marvels of beauty. There are many tables that are of special value; as specimens, we mention the one on page 7, showing the length of a degree of longitude, at the various latitudes, and the one on the last page of the book, showing the latitude, longitude, altitude, temperature and yearly rain-fall of some 200 places.

We note a few things to criticise adversely. We dissent *in toto* from the statement on page 6, that "geographical circles are not planes." A circle is a circle, any where. We think the explanation of the philosophy of the tides can be improved. On page 70.

we read that 'the winds and rains result from differences in the temperature of the air.' Is this the *sole* cause? On page 76, the language sometimes seems to countenance the absurdity found in many of our text-books, that "warm air rises, and cold air rushes in to fill its place." On page 62, we are told that the sun is "nearest the earth," in March and September, and "more distant," from the earth in June and December. We have learned that the sun is nearest the earth in January, and most distant in July. On page 108, we find the Yak and Chamois figured among the animals of North America.

This book will be found to contain many of the grand generalizations and theories of the author's *Earth and Man*. We quote the concluding sentence, as a key to the spirit of the whole, "Truly no blind force gave our earth the forms so well adapted to perform these functions. The conclusion is irresistible,—that the entire globe is a grand organism, every feature of which is the out-growth of a definite plan of the all-wise Creator for the manifestation of his own glory, and the education of the human family.

BOOKS AND PAMPHLETS RECEIVED.

The Franklin Readers. 1st, 2d, 3d, 4th, 5th. Boston, BREWER & TILESTON. Chicago, HENRY B. TOWNE.

A Grammar-School Spelling Book, by B. F. TWEED, A. M. Boston, LEE & SHEPARD.
Language Lessons, by WILLIAM SWINTON. New York, HARPER & BROTHERS. Indianapolis, J. M. OLCOTT.

Surveying and Navigation, by A. SCHUYLER. Cincinnati, WILSON, HINKLE & CO.

Kindergarten Culture, by W. N. HAILMAN. Cincinnati, WILSON HINKLE & CO.

Lectures on the Study of History, by GOLDWIN SMITH, A. M. New York, HARPER & BROTHERS. Chicago, JANSEN, MCCLURG & CO.

Outlines of History; Questions to Outlines of History, and Historical Atlas. Philadelphia, CLAXTON, REMSEN & HAFFELFINGER. Chicago, JANSEN, MCCLURG & CO.

PUBLISHERS' DEPARTMENT.

Many of our subscribers are ordering books through the SCHOOLMASTER; and we have yet to learn that any one who has done so is not thoroughly satisfied. We are glad to furnish our friends with good books at rates advantageous to them; and we will furnish none but *good* books. Send in your orders.

The SCHOOLMASTER will have some heavy bills to settle at the close of the year; to do this, we must have more money than in ordinary times. We, therefore, make the following proposition to our subscribers. Any one of our present subscribers may renew for one year or more, remitting to us at the rate of \$1.25 per year. This offer will hold good *only till Dec. 15th, 1873.*

MR L. H. POOLE, the well-known Merchant Tailor, still continues business at his old stand, with Norris & Howard, in Minerva Block, Bloomington. He has a fine supply of Fall and Winter goods, and is prepared to make garments for gentlemen's wear, in the best style, for reasonable prices. We have known Mr. Poole for several years, and have always found him prompt and gentlemanly in his dealings. From personal experience, we believe that his work compares favorably, both in quality and price, with that of eastern cities. Give him a call.

ILLINOIS TEACHER, }
Volume XIX.

THE

{ CHICAGO SCHOOLMASTER,
Volume VI.

ILLINOIS SCHOOLMASTER.

A JOURNAL OF EDUCATIONAL LITERATURE AND NEWS.

VOLUME VI.

DECEMBER, 1873.

NUMBER 67.

TEXT BOOKS.

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The children of fifty years ago, compared by this standard with ours, must have been fools and idiots. What could a boy or girl have been expected to know, whose entire school outfit consisted of the English Reader, Daboll's Arithmetic, Webster's Spelling-Book, a few

sheets of paper, and an ounce or two of home-made ink in a horn, and a hard-nibbed pen ?

Then, three dollars worth of school books served a whole family of children their entire school days. The cost of school books has increased ten-fold since that golden (?) age.

Has education increased in the same ratio ? Does the average boy or girl of the present, know ten times as much as did the average boy or girl fifty years ago ?

And so we have come to the question regarding text-books, that everybody seems disposed to ask—Does it pay ? Are we, the people, doing the best thing ? Are we quite sure that we can subscribe ‘value received’ to this text-book matter ?

I am no croaker,—no chronic grumbler ; I believe in “progress”—am a nineteenth-century man ; yet I believe it to be the part of wisdom to stop occasionally in our somewhat rapid career, and, as the Arabs say, “Orient”,—take our bearings, and learn how far we are making real progress, and how far the currents of popular, *fashionable* notions or sentiments are carrying us away from the point sought. There is a difference, and we ought to see it, between moving, and moving directly toward a given point.

It seems to me that in the abundance, the super-abundance of the *means* we have almost lost sight of the *end*.

Text-books are a help, and in some departments of study a necessity ; but because they are a help, a means, we have come to regard them as an end.

Pupils are set to study, to master the text-book ; this they may be able to do, yet *know* very little of the subject.

That little girl who had memorized the names of all the capitals of the several States, on being asked what a capital is, was at a loss to answer ; but on being shown a picture of the city of Augusta, on the Kennebec river, pointed to a *steamboat* in the picture as the *thing* called a capital.

In some departments of study, as we have said, the text-book is a necessity. Little could be done in the study of the Latin language, without the grammar, while comparatively little is, or can be, learned of practical English from the use of the book.

It is economy to set before the pupil examples, and many of them illustrating the few simple principles of arithmetic.

Learning to read is at best a slow process, and the steps are necessarily short, but with such a wealth of good juvenile literature as we now have, do we need both "reading-books" and books to read?

The spelling-book has no place in our schools. Spelling, in school-work, like religion in life-work, should enter into, and become a part of, every exercise.

Writing must be learned, but does the boy need to go through all the numbers of the series before he can write his name or a note, so that it can be easily read?

And then as to geography! First steps, primary, intermediate, common-school, high-school, comprehensive, universal, and, permit me to add, everlasting geography!!

There is in the use of these text-books little culture. Little positive knowledge of facts is retained.

The study of geography, the use of geographical text-books, has become a disease, a morbid growth in our school system, which needs active treatment, heroic surgery, to cure and remove.

In fact, there is no primary or intermediate geography. The latter contains what was learned and forgotten from the former, with a little added of the same sort.

Could we not teach as much of the common-school branches, and teach as well, were the number of text-books reduced fifty per cent?

How many dollars would be saved, and how much muscle could be spared for purposes more useful, than "toting" school-books to and from the school-house.

My little girl carries to and brings from school, eight pounds and six ounces of books every day, and yet she is not over school-wise.

As to the natural sciences, the "new studies," as they are called, I feel inclined to say but little, as Mr. Forbes so thoughtfully and philosophically presented the subject in the November number of the *SCHOOLMASTER*.

It is thought by many, that finely illustrated books are helpful in this department of study, and they may be, but good pictorial illustrations add greatly to the first cost of the book, and after all may not the book be *less* valuable? Is the inducement to study objects themselves,

as great when the picture is before us. If we ever know what a petal or a stipule is, we need to see it.

If it were the purpose of study to be able to *tell* about things, the text-book would be sufficient. If we would know about things (objects) it is better to study them.

As I have said, the people are asking questions about this text-book matter—they complain. Are they unreasonable? I take it that the people of this State are fairly intelligent. I think we gravely insult them when we say they do not know what they want or need. I believe they are ever willing to pay a dollar for a dollar's worth; but they do demand the dollar's worth. The teacher is expected to know what is needed, and he ought to know. To him the parent looks for advice, direction regarding the books to be furnished and used. The State of Illinois may be justly proud of her many fine school edifices; her school children do not lack for books; yet our schools are not doing what they might, and what they ought to do. Would it not be better to invest less in bricks and books, and more in brains.

J. A. SEWALL.

STUDY AND HEALTH.

Alarmists have written eloquently on "the Slaughter of the Innocents" in school by over study, alleging that severe application is impairing the health of multitudes, and that the study hours should be reduced to five, four, and, as some strenuously contend, three hours a day. If "The Slaughter of the Innocents" in school be not a "Yankee Notion," it is at least one little known in Europe. The German boys and English girls study more hours than our youth, and yet have better health. In Europe young and old are out more in the open air. The bloom and vigor of English women is due largely to their freer and fuller exercise in the street, the park, the forest and the field. The physical education of children is everywhere encouraged if not enforced. Out-door recreation is systematized. Besides the daily walks, frequent excursions into the country and appropriate plays are provided, for girls as well as boys. The American girl is not a match for her English cousins in these pedestrian excursions. We have yet to learn that air

and exercise are as essential to health as food and sleep. The single habit of late hours harms our children more than hard study. The example of Germany is well worthy of imitation. Early hours are there the rule, early to school (at seven in summer and eight in winter) and early to bed. Even the opera, concert and theater begin at six or seven o'clock and close at nine or ten.

It is a common but mistaken impression that study is unfavorable to health. That the laws of hygiene are sadly neglected and that ignorance of physiology breeds serious mischief is no doubt true. There are also exceptional cases of children who are constitutionally too frail or nervous to bear the stimulus or tasks of school. But wide observation confirms the conclusion that, as a rule, our schools do not overtask the brain or injure health. It is fashionable to charge to the school a long list of ills which really belong to a different "account."

The proper training and exertion of the mind will not harm the health. The body is the instrument through which the mind works, and its power depends, in no small degree, on the vigor of the physical system. Increased effort and energy of mind must be balanced by proper activity of the body. The mischievous error prevalent on this subject is a common excuse for indolence and inefficiency. Study need not be injurious to health. The mind itself was made to work. Its primal law is growth by work. It can gain strength only by spending it. The intensest study invigorates the body as well as the mind, strengthens both the nervous and muscular system, makes the blood course in stronger health-giving currents through the system, enlarges the brain, erects the form, softens the features, brightens the eye, animates the countenance, dignifies the whole person, and in every way conduces to health, provided only that it is pursued in accordance with the laws of hygiene as to diet, exercise, rest, sleep and ventilation.

Undoubtedly the minds of very little children are often stimulated by parents and nurses to premature and therefore injurious activity. I have no sympathy with any processes for initiating babes in the knowledge of books. Such prodigies, however they may gratify the pride of parents, always suggest painful apprehensions of future debility and premature decrepitude. Precocity is unnatural and undesirable, because it is the symptom, if not the cause, of disease. Early ripeness of mind, as of fruit, is hastened by a secret enemy at the core, and

however attractive the exterior, it is found in reality lifeless and insipid. It shows well for a time, like plants in a hot-house with large tops and little roots. What is gained in time poorly compensates for the loss of maturity and spirit. Precocity stunts the growth of both body and mind, if it does not become the tomb of talents and health. Lucretia Maria Davidson wrote verses at four years, and died before completing her seventeenth year, leaving over two hundred separate pieces of poetic composition. Her sister Margaret began to write poetry at six, at ten acted in a passionate drama in New York City, and died at fourteen.

Where is to be found a man of strength who was a prodigy in reading and reasoning at four years? Dr. Johnson used dryly to ask, "what becomes of all the clever children." Many children begin the study of books when they should be following the strong native bent of childhood in observing objects. The perceptive faculties should be first addressed. Teachers too seldom inquire what is the order in which the juvenile powers are to be developed, and hence lessons are often assigned which task the reflective faculties chiefly, when, in the natural order of growth, they should be comparatively latent. Violence is done to a child who, at this tender age, is harassed with problems of arithmetic or intricacies of grammar. Observation precedes reflection. At the earliest school age, the memory as well as the perceptive faculties may be pleasantly and safely exercised with attractive lessons, or observations rather, on form, color, size, weight, place, number, time, the obvious qualities of common things, and the form of spelling of words, and in reading. Let those exercises be very brief—relieved after each lesson by gymnastics or marchings and music, and the primary school becomes a sort of play or kindergarden, safe and healthful for vigorous children of five years of age.

But the objection under consideration relates chiefly to much older children. In regard to them even the wise man is quoted to confirm that view: "Much study is a weariness of the flesh." Very true. So also the most invigorating and healthful kinds of labor and exercise bring for the time weariness, till relieved by repose. There are undoubtedly exceptional cases of older children, whose nervous state, or otherwise abnormal condition, requires the partial or entire suspension of study. But even in these cases, the illness is commonly due to other causes than excessive study. When the plainest laws of health are

violated, when, for example, children, are crammed with mince-pies, colored candies, or doughnuts, between meals and before retiring, it is hardly fair that the inevitable result should be charged to the overtasking of the teacher.

After the earnest studies of school, and in addition to all the gymnastics there introduced, let children be encouraged to walk and ride, work and play, run and romp; let them row boats, jump rope, trundle hoop, twang the bow, pitch quoits, try for ten strikes, play at ball-base, cricket, or croquet, or with shuttlecock and battledoor, and then we shall hear far less of the evil of overtasking the brain. I have no fear of stimulating healthy children of suitable age, to excessive study during school hours provided they are relieved by proper intervals for gymnastics and music.

The history of West Point well illustrates the healthfulness of study, and recommends to all students the hygienic regulations there found to be so successful. Though the standard of admission is low, the demand for application is unusually exacting, and the relative progress remarkable. No other institution has so uniformly and rigidly insisted on thoroughness of study and instruction. The example of such exact methods, both of learning and teaching, is fitted to exert a happy influence upon the cause of education throughout the land. Says a competent observer and a graduate: "The course of the Military Academy is probably the most severe of any similar one in the world." The cadets are instructed, not in classes but in small sections of from ten to twelve each, and in these small sections not less than one hour and a half is devoted to each recitation in mathematics, science, natural philosophy or engineering, and the shortest recitations occupy at least one hour. The great characteristic excellence of the system here adopted is the amount of personal instruction given to individuals, and in adaptation to the perceived deficiencies, or excellences, of each cadet. This plan soon tests and discovers the capacity of individuals. It necessitates the mastery of every lesson. It leaves no way to shirk knotty points, to dodge hard problems or calculate "the chance of not being called up to-day," as is so often done in other institutions. The cadet never has occasion to say that he has mastered the lesson, for nothing is taken for granted, and nothing is done by proxy. He must always give the proof by himself solving *every* problem or demonstrating *every* theorem, or stat-

ing and defending every principle or fact in clear and exact terms. In geometry, for example, in addition to the demonstrations, he must be ready, at every recitation, to draw from memory all the diagrams embraced, both in the advance and review lesson, and enunciate accurately all the propositions and principles involved. He must be prepared in this way to state and demonstrate any proposition over which he has passed in any part of his course. *All the diagrams* of both the advance and review lesson must be daily drawn by every cadet in each section. The same method is substantially adopted in the various branches of mathematics, until, by frequent reiteration, the most profound principles and difficult processes become familiar as the daily drills have rendered the manual of arms.

Notwithstanding the severity of the studies and exacting rigor of the recitations, and the rivalry of the students, the health of the cadets is uncommonly good. It is a rare thing for a cadet to break down from over-study. This is due, not primarily to the fact that all candidates admitted must possess a sound constitution, but more to the excellent hygienic rules of the academy.

In no other literary institution within my knowledge are the laws of health so rigidly observed; in no other are the requirements for study so severe and unrelenting, especially in the higher mathematics. One of the cadets, among the best scholars of his class, said to me, "Before I came under this rigid *regime*, I could scarcely bear a tithe of the application I have safely practiced." There are regular hours for study, recreation, exercise, sleep and meals. The food is ample but the diet plain. No restaurant is tolerated on the premises, to suggest or facilitate the noxious practice of eating between meals, or at late hours in the evening. No tempting "saloon" disturbs the stomach with pastry, cakes, or confectionery. The regular and frequent military drills, the gymnasium, and the equitation-hall, invite or exact abundant and most invigorating exercise.

B. G. NORTHROP.

SCHOOL SESSIONS.

In the October number of the *SCHOOLMASTER*, an article with the above title contains some thoughts worthy of careful perusal. Although the one-session plan is not very generally adopted at the West, a few towns use it, and it seems to be gaining favor.

To secure the best work in a given time, without injury to the pupils' health, or to the discipline of the school, is a problem whose conditions are by no means uniform. The business hours of the community, the age of the pupils, the average distance traveled in coming to school, and the conveniences of the school-house, must all come into consideration. The ordinary dinner hour of the families which are represented in school is certainly an important fact to consider. Hence no general law can be laid down. We know not whose wisdom first fixed upon six hours a day, in two sessions of equal length, as the proper limit for school work, but in most communities, it is as well established as the time of church services. Perhaps some bold innovators may try to change it, but they will find a formidable prejudice to overcome.

The temptation to work pupils closely is exceedingly strong. Our pupils are expected to graduate from the High School fitted for college, at least in every thing but Greek, and to have a pretty fair acquaintance with four or more natural sciences. This work is to be done generally in three years. The better the lower grades, the younger the pupils when they come to the High School. Hence they are less mature, less informed in matters outside of school work, less able to work hard, and not fully developed physically. To induce them to go slow, to take four or five years for their work, is impossible. If they cannot keep up with their class, the majority will leave school. The duller pupil will sometimes deliberately commit mental suicide rather than admit his dullness, and his parents often will aid him to kill himself, and then charge the fault upon the school. Yet teachers need caution in assigning work. The fair working average of a class is the proper limit. Courses of study should be somewhat flexible, and quality rather than quantity be aimed at. Most school courses will bear cutting down.

We cannot agree with Mr. Perkins that the habit of doing the

principal business of the day between two full meals is even a considerable cause of the "paralysis, apoplexy, meningitis, pneumonia, and other similar diseases," common among business men. There is excellent physiological authority for taking only two meals a day, say from 7 to 8 a. m., and from 4 to 5 p. m. And we know instances of greatly improved health occasioned by a change from three meals a day to two.

Having given some thought to this subject, and having experimented with the one-session and the two-session plan, we have adopted the following as the best *for our circumstances*. The school is in a large village, but draws at least one-third of its pupils from distances more than a mile from the school house. The ordinary dinner hour is about twelve. There is no one business prominent enough to control the hours of meals. Mr. Perkins' experience of the one-session plan in Lawrence, Mass., was gained in a factory town, where the mill hours influenced every movement of the community.

(Please regard this as a first contribution toward the publishing of the working plan of schools suggested in the SCHOOLMASTER some months ago, but never acted upon.)

PROGRAMME.

8:50 a. m.—Pupils assemble in their several class rooms, and file into chapel. Devotional and general exercises and return to rooms, occupy twenty minutes.

9:10—Spelling lesson for the whole school, ten minutes. Not an unimportant aid to punctuality to have a lesson due from every pupil early in the session.

9:20—Recitation, 50 minutes.

10:10— " " "

Allowing for change of classes or teachers, the time of these recitations is about 45 minutes. If possible, the same pupils do not recite in consecutive hours. In the early part of the day, the classes can be kept a little closer to their work than later.

11:00—Recess, fifteen minutes.

11:15—Recitation, 55 "

12:10—Close of morning session.

One hour and five minutes between sessions.

At least half of the pupils and teachers remain at noon. A large

rough room in the basement, dry, warm, and well-lighted, is allotted to the boys, where they are allowed large liberty. The room contains some gymnastic apparatus.

1:15—Recitation, 55 minutes.

2:10—Recess, 15 “

2:25—Recitation, 55 “

Close at 3:20. Length of school session, from 8:50 a. m. to 3:20 p. m., six hours and a half. Time of recess and nooning, one hour and thirty-five minutes. The pupils generally recite three lessons a day, besides their spelling lesson, requiring a little more than two hours and a half, leaving about two hours clear for study. The building is open early and late. Many pupils do a large portion of their work before and after school, particularly in the library. It is expected that an average pupil will require two hours study out of school. The early closing accommodates those who live at a distance. The literary society holds its session at the close of school, thus avoiding the loss of a whole evening, and an extra journey to and fro.

With slight variations, this plan has been tried for five years with good results.

HENRY L. BOLTWOOD.

MODERN HISTORY.

The following correspondence may convey some needed information to others than the inquirer:

“Can you refer me to a text-book on Modern European History, especially English, which is suitable for a course of twenty-four weeks in a High School? We need such a one here. Also, in your opinion of standard works, what author or group of authors gives the most complete and authentic history of England? M.”

I know of no such book, exactly, as M. asks for. We have Taylor's *Manual of Modern History* (8vo, pp. 312, \$2.00, Appletons), which is too large for his purpose. It is a well-written compend, quite full and valuable for a fuller course of study, as in college, or for consultation in one's library: it contains much information, well selected, so as to give the principal facts with due regard to their relative importance. Russell's *History of Modern Europe* was once much used; it was brought down to 1763, the end

of the seven years' war, and has been continued by others to 1856. This has been epitomized from four volumes octavo, to one volume. I have not seen this epitome; its value is doubtful since the *Athenaeum* condemns it; and of Russell's work itself the *Quarterly* said that though the best we have, it is a miserable compilation. Hallam's *Middle Ages* is now reduced to a single volume of the *Student's Series*, (12 mo. pp. 708, \$2.00, Harpers), with many improvements by the editor; but to a pupil or to an uninformed reader, it will be a discussion of the consequences of the events of history rather than a relation of the events. For instance, the battle of Hastings, a pivotal event, is alluded to, but not related; while its consequences are largely discussed. Prof. Keoppen's *World in the Middle Ages, an Historical Geography*, (in 2 vols. 12 mo. pp. 850, \$3.50, with an atlas, or in 1 vol. folio pp. 232 \$4.50, Appletons), covers the period from the end of the fourth century to the middle of the fifteenth; it is valuable both for its text and its maps, made up from Spruner; I find in it much about the smaller powers of Europe as well as the greater ones, that I can not easily find any where else; but it is dry, very dry; a great compilation of details, but with now and then spirited sketches, of which his § 327, the battle of Dorylaeum, may be a sample. Prof. G. W. Greene's *History of the Middle Ages*, (11mo. pp. 454, \$1.50, Appletons), of which Prof. Porter says it is a useful and trustworthy manual, would not answer M's purpose, as it covers the middle ages only. It is indeed an excellent little book, and ought always to accompany the *Student's Hallam*. It deals with the time from A. D. 395 to A. D. 1453; that is. from the division of the Roman empire to the taking of Constantinople by the Turks. It is full of facts, and is mostly valuable for them; but it does not give the statement and discussion of causes and effects in history. Its appendix contains tables of genealogies, of sovereigns, of chronology, and the like, the material for which I have sometimes sought vainly in a score of volumes.

Of all books that I know to be readily obtainable, I recommend as best, Freeman's *Outlines of History*, (Henry Holt & Co., 16mo. pp. 366, \$1.25), a small, compact, handy volume, written by an eminent scholar in history, in a style whose peculiarity only makes it seem fresh and life-like, and with an appreciation and presentation

of both the facts and the philosophy of history that many greater works fail of. Only about ninety pages are given to the ancient history of Greece and Rome and other nations whose history is involved with theirs: The introductory chapter on "the Origin of the Nations" is as essential to modern as to ancient history, and the sixth chapter (p. 110) begins middle-age history, according to the common view, which dates from the fall of the Western Empire. It is a natural tendency of English-speaking people to exaggerate the historical importance of England, and of its near neighbor, but frequent antagonist, France; but Mr. Freeman is noted for his Roman tendency; that is, a tendency to view ancient history with constant reference to Rome as the central figure, and to view middle and modern history with reference to the "Holy Roman Empire," revived in Charlemagne in the year 800, and continued in the German line of his successors; and with this look to the modern Empire is his recognition of Roman influence in the church, in literature, and in the revival of learning through Italy, as well as in law and polity. This book of *Outlines* is the first book of Freeman's "Historical Course for Schools."

The best history of England is Knight's *Popular History of England*, costing here in Chicago, \$25 at this time; a work in eight octavo volumes, well printed and illustrated. It comes down to the death of Prince Albert, Dec. 14th, 1861. Of about equal value is the work (8 vols. 8vo.) known as Knight's *Pictorial History of England*, of which Geo. L. Craik and Charles Macfarlane were principal writers, the work being done by several persons under Charles Knight's editorship; its great value is in its abundant illustrations, which are not fancy sketches, but veritable representations. It is not equal in style to the other work, and comes down only to 1820. I do not know whether it is now in market. I bought a copy six years ago. It is of this work that Dr. Allibone says, "The possession of all the histories of England in existence, from the ancient *Chronicles* of Geoffrey of Monmouth to the as yet unfinished version of Lord Macaulay inclusive, will not compensate for the absence of the *Pictorial History*." Macfarlane issued the chapters of it on the civil and military history of England under the title *Cabinet History of England*, in 26 vols. 18mo., with which I am not acquainted.

The best one-volume *History of England* that I know is Hume's, abridged and continued, as edited by Dr. Smith for the Student's Series (12mo. pp. 789, \$2.00, Harpers). The genealogical tables, table of contemporary sovereigns, table of archbishops, illustrations, and notes on important political affairs and laws of a constitutional character, make it a superior book. Lossing's *History of England*, one of *Putnam's Popular Histories* (12mo. pp. 647, \$2.50) is a good book, in pleasant style, so that it would, no doubt, be a pleasanter text-book than the fuller book of the Student's Series. It has special chapters on fashions, customs, and state of civilization. Lossing's other histories are notable for maps, plans, and illustrative wood-cuts, of practical value; the absence of them in this work is therefore the more noticeable; it has but three maps, and no illustrations; but the volume is admirably printed, on good tinted paper, and gratifies the taste. A little more work in tables, genealogies, and revision, to rid it of some few errors, would greatly increase its value.

If a smaller History of England is wanted, Anderson's is worthy of special notice (12mo. pp. 300, \$1.60), having all the good qualities of his other histories, without that disagreeable condensation which is distasteful, even when necessary. The History of England which makes the second volume of Mr. Freeman's series (16mo. \$1.00, Henry Holt & Co.), is hardly out of press yet in this country; it is by Miss Edith Thompson, who is introduced by Dr. Freeman as editor.

With the History of England, that of France must be studied; and until lately a good one-volume history of France has been wanting. Now the *Student's History of France*, (12mo. pp. 730, \$2.00, Harpers) meets the want. It is to be regretted that good maps are not put into the Student's Series.

To sum up for a brief statement of general history, intended to show the relations of nations to each other with suggestions of the prominent and formative facts in their several histories, use Freeman's *Outlines*: let the teacher have for reference and fuller information at his desk or in the high-school library, the Student's *Hume Abridged*, *History of France*, *Greene's* and *Hallam's Middle Ages*, with Koeppen's *Historical Geography*, costing in all at retail \$12.00,

and he will have a good outfit for historical information about modern times. Add Taylor's *Manual*, and Kohlrausch's *History of Germany* (8vo. pp. 487, \$2.50, Appletons), and a pretty full outfit is in hand.

SAMUEL WILLARD.

POPULAR ERRORS.

MESSRS. EDITORS :—In compliance with your polite invitation, I will point out a few of what, to me, seems to be popular errors. If they are errors, I think they should be corrected, instead of being inculcated, by those who are engaged in the noble and arduous duties devolving upon educators of the rising generation. The day is rapidly passing away, in which the mere *dicta* of teachers and text-books are taken as conclusive authority ; and the time is even now near at hand when the principles upon which rules are based, and their significance, and their applications to the subjects, of which they treat, will be regarded as of more importance than the rules themselves, which should be treated as only legitimate deductions from what had been already learned, instead of being looked upon as the indispensable keys to knowledge.

The errors to which I refer are in the popular use of our own language ; and, in deciding whether or not they are such, I appeal to the reason of your readers, rather than to any authority in the text-books, or to the opinions of practical teachers. These are opponents, generally, rather than advocates of the views which I now propose to introduce. The examples which I shall employ, in giving illustrations, are mostly taken from writers of acknowledged ability.

Example : “The other six are published in both the French and the German languages.”

It is generally understood that there is but one French language ; it is, therefore, absurd to say, “in both the French languages.” For the same reason, it is equally absurd to say, “The German languages.” The sentence in full would read : “The other six are published both in the French language and in the German language.” The abbreviation is justifiable, of course ; but using both terms, French and German, as applicable to languages, in the plural form, is not

justifiable, as the French language is exclusively French, and the German language is exclusively German. Yet these erroneous forms of expression are so common as to be almost universally employed.

Example: "It can be obtained at the residence of R. M. Paulins, corner of Fifteenth and Pine streets." As there is but one Fifteenth street, and but one Pine street, in the city in question, and as there are no streets that are partly Fifteenth and partly Pine, to which these terms can unitedly be applied, the absurdity, in the above example, is patent to common understanding.

Example: "The Cambridge, Washington, and Cincinnati observatories."

The writer had just been giving the power of the telescope in the observatory in each of these cities; it is, therefore, absurd to apply the separately locating terms to the observatories collectively.

Example: "Louisiana, from the French and Spanish civilizations of the eighteenth century."

The writer then proceeds immediately to give the distinctive features of the two civilizations, and as there was but one French civilization, and but one Spanish civilization, we can not say French civilizations, nor Spanish civilizations; and as there were no civilizations common to the French and to the Spaniards, there were no civilizations to which the terms French and Spanish could be properly applied.

Example: "Turning into a side street leading off from Royal, or Chartres, or Bourgoyne, or Dauphin, or Rampart streets—."

Here we have illustrated the force of a vicious habit, and the example is taken from one of our popular writers. The habit of putting the noun in the plural after adjectives, which can not apply collectively to the noun in the plural, frequently betrays even good writers into putting the noun in the plural after adjectives which are employed separately, as showed in the above example, by the alternative *or* being placed before each. This form of the error is of frequent occurrence.

Example: "On the eastern and western sides of Jackson Square."

As the eastern side of Jackson square is wholly eastern, and the western side is wholly western, and as there are no sides to that

square which are mixedly in part eastern and in part western, there can be no eastern and western sides in common.

Example: "The Masonic, City, and Exposition Halls."

That there is a Masonic Hall, a City Hall, and an Exposition Hall, in New Orleans, I am not disposed to doubt; but I must be excused for doubting that there are any Halls in that city so promiscuously dedicated that the three definitions Masonic, City, and Exposition, can be affirmed of them.

Examples: "At the corner of Royal, and Conti streets"—"At the corner of Esplanade and Old Levee streets—." Such examples may be found *ad infinitum*; but this branch of the subject has probably been sufficiently elaborated. On a recent visit to Chicago, I noticed that on the old street cars, on a certain route, that route was indicated by these words on the sides of the cars: "State and Madison Sts." But, on the new cars, it was: "State and Madison St." I do not pretend that this change resulted from the sorry efforts of the papers to ridicule my strictures, on this subject, on different occasions; but it is rather a matter of self-complacency to imagine that such is the case.

A very common form of this error is seen in the phrases: "The first, second, and fifth verses." "The seventh and eight chapters." "The fourth and fifth sections." "The eleventh and thirteenth centuries," and the like.

After what has been said, it is, perhaps, not necessary to comment upon these examples; any intelligent child can see the absurdity involved in them.

But, to put this point beyond question, let me introduce a single illustration, by employing the French language. Take the favorite phrase employed by our County Superintendents of schools, in several counties in this State, in giving notice that they will hold examinations "On the first and third Saturdays of each month." All scholars know that, in most languages, the article and the adjective, employing terms in common use, must agree with their nouns in number and in gender.

Now if we say: *Les premiers et troisiemes samedis de chaque mois*," there must be more than one first, and more than one third Saturday in each month, as the article and the adjectives are in the

plural, and must have a plural noun with which to agree. If we say : "*Le premier et troisieme samedi de chaque mois,*" the article and the adjectives in the singular number can not agree with the noun in the plural. This illustration I regard as conclusive of the whole question, and one to which there can be no reply. It is no reply to say that the expression is permissible in English, because the article and the adjective are not obliged to agree with the noun, though it may be absurd in another language. But the sense is the same in both languages, and that is omnipotent in such cases. There can not be more than one first Saturday, nor more than one third Saturday, in each month, in English, any more than there can be in French : and no amount of authority can render an absurdity respectable. Grammatical accidents must not be allowed to stultify the minds of students.

But, judging from the experiences of the past, as these errors will be persisted in, and strenuously defended, allow me to take another turn at them. In speaking of two horses, each of which is in part white and in part black, we can evidently say, the black and white horses, because the two descriptions, black and white, can both be affirmed of each horse ; but, if the one horse is entirely black, and the other is entirely white, we can not say the black and white horses, because the words black and white are not descriptive of each horse, nor of both of them ; and the phrase would, in that case, convey a false idea.

I am aware that this conflicts with the text-books ; but as they are mostly, like our hats and our coats, gotten up to order, to sell, and must be in the popular style, they are not binding upon people of sense. The truth is, in such cases, the mind of the writer, or speaker, must decide, independently of all authorities. If one is speaking of a single horse that is in part black, and in part white, he can say, with propriety, the black and white horse. If speaking of several horses, each of which is in part black and in part white, he can say the black and white horses ; but, if speaking of two horses, the one of which is entirely black, and the other entirely white, he must repeat the article, and say, the black and the white horse ; if speaking of several horses, a part of which are entirely black, and the rest entirely white, he must repeat the article, and say, the black

and the white horses. That is, unless both, or all, of the terms can be properly applied to both, or to all, of the objects described, the article must be repeated and the noun must not be put in the plural, unless speaking of more than two objects. If the article is not used at all, in speaking of two objects, the noun must be in the singular number; as Main and Front street, this being only an abbreviation of Main street and Front street; but never Main and Front streets. Let no one say that this is trifling. If it is important, as all seem to think it is, that English grammar should be studied at all in our schools, let it be so studied as to call out independent, individual thought on the part of the scholars, and not the stultifying process of forever repeating the crudities in the text-books, and resting on them as ultimate knowledge of the subject.

I think that, in many instances, the word *such* is improperly used. In such expressions as: I never saw such a large crowd—such a noisy meeting. Here *such* is employed instead of the intensive adjunct *so*—an evident error, and a very common one. It should be written: So large a crowd—so noisy a meeting. In the expression, such a crowd, such a meeting, the *suchness* of the crowd, or of the meeting, may consist in the number of persons present, or their conduct, or their appearance. Many examples of this error might be given, but it is probably sufficient to hint at it.

Another error is quite common, in such expressions as; He is a friend of mine—that is an error of his—it is a saying of his friend's. Of course it is correct to say, those are your books, and these are some of mine—some of my books; but in the sentence: He is a friend of mine, the meaning is not that he is a friend of my friends. He might be a friend of my enemies, or of my dog; but that he is one of my friends is evidently what is meant. So, in the sentence: That is an error of his, the meaning might be an error of his judgment, or of his sight, or of his figuring. But the meaning evidently is his error, or one of his errors. Again, in the sentence: It is a saying of his friend's, one might ask, of his friend's what? It should be written—of his friend. There are other popular errors which I should take pleasure in noticing, gentlemen, but having already taken large liberty with your space, I must forbear. PUNCTUM.

BLOOMINGTON, Nov. 2, 1873.

ARITHMETIC. V.

It is evident that, if we are to deal with the factors of a number, we must know what those factors are; the only *general* method of finding whether one number is a factor of another is by trial, that is, by attempting to divide the number by the proposed factor. But, for *two, three, four, five, nine, eleven, twenty-five* and some other numbers as factors, such trial is not necessary; because we can ascertain by convenient *tests*, whether a given number contains any one of these as a factor. And I shall now give the tests for all the numbers named above, and shall demonstrate the truth of each test, resting the demonstration upon the principles demonstrated in the last SCHOOLMASTER.

TEST FOR TWO. *Two is a factor of any number, if it will divide the units of that number.* Demonstration. Postulate: any number expressed by more than one figure is equal to its tens plus its units. One ten is found to be a multiple of two by experiment, and any number of tens must be a multiple of two, by Principle I; hence, if the units of the number are a multiple of two, two is a factor of the entire number, by Principle II. Notice that no units may be said to be *no times two*; hence, if the unit figure is a zero, there is no need of changing the language to express either the test or its demonstration. Illustration. 474 is a multiple of two, because 47 tens must be a multiple of two, for one ten is a multiple of two; and four being a multiple of two, the whole number is the sum of two multiples of two.

TEST FOR FIVE. The test for five may be stated and demonstrated in the same way as the test for two, by simply substituting five for two in every place.

TEST FOR FOUR. *Any number is a multiple of four when its two right-hand figures as they stand express a multiple of four.* Demonstration. Postulate: every number expressed by more than two figures may be considered as a number of hundreds, plus the number of units expressed by its two right-hand figures. One hundred is known to be a multiple of four, therefore any number of hundreds must be a multiple of four by Principle I. As the hundreds of every number must be a multiple of four, the whole number will be so, if the units expressed by the two right-hand figures be a multiple of four. This follows from Principle II. Illustration. 57616 expresses a multiple of four; for, as one hundred is a multiple of four, 576 hundreds must be so; and as sixteen is a multiple of four, the whole number is the sum of two multiples of four.

TEST FOR TWENTY-FIVE. The test for twenty-five, with its demonstra-

tion may be stated in the same language as that for four, by substituting twenty-five for four in every instance.

TEST FOR NINE. *Any number is a multiple of nine, if the sum of the shape-values of its figures is a multiple of nine.* Demonstration. Postulate : every number must equal the sum of the place-values of its figures. The demonstration will consist of the three propositions following. Proposition I. *The figure 1 in any place in the decimal system expresses one more than a multiple of nine.* If it be in the units place, it expresses one more than no times nine. If it be in any other place, some number of zeros will be found at the right of it ; and, if we take one from a number so expressed, the remainder will be expressed by 9's only ; such a number must be a multiple of nine. Therefore, the 1 expresses a multiple of nine, plus one. Proposition II. *Any figure in any place in the decimal system expresses a multiple of nine plus its shape-value.* We have seen that 1 in any place expresses a multiple of nine plus one ; and it is plain that any other figure, in place of the 1, will express as many times the value of 1 in that place as its shape shall indicate. But, any number of times a multiple is itself a multiple by Principle I ; hence, the whole value will be a multiple of nine plus the shape-value of the figure. Proposition III. *Any number is a multiple of nine, plus the sum of the shape-values of its figures.* We have seen that every figure expresses a multiple of nine, plus its shape-value, and we postulated that the whole number is the sum of the values of the several figures. But the sum of the multiples will be a multiple by Principle II ; hence, the truth of the proposition. It follows from this third proposition, by Principle II, that the whole number is a multiple of nine, if the sum of the shape-values of its figures is a multiple of nine. Illustration. 5895 is a multiple of nine ; because the sum of the shape-values of its figures is 27, a multiple of nine.

It is worthy of remark, in passing, that the rules for "casting out the nines" derive all their validity from the truth of this third proposition. Also, all the curious "properties of nine" and the puzzles based on those properties are due to the same truth. It will also be seen that, if our system of notation were based on eight instead of ten, seven would possess the same curious properties ; they will always belong to the number which is one less than the base.

TEST FOR THREE. The test is stated in the same way as the one for nine, by substituting three for nine. Demonstration. That part of every number which is a multiple of nine is, of course, a multiple of three ; hence, if the sum of the shape-values of the digits is a multiple of three, the whole number must be so, by Principle II.

TEST FOR ELEVEN. *If the sums of the shape-values of the alternate figures differ by a multiple of eleven, the whole number is a multiple of eleven.* Demonstration. We assume the same postulate as in the demonstration of the test for nine. Proposition I. *The figure 1 in an odd place in the decimal system expresses one more than a multiple of eleven.* If it be in the units place, the truth of the proposition is apparent; if it be in any other odd place, there will be found an even number of zeros at its right. If one be taken from any number thus expressed, it is seen that the remainder will be expressed by an even number of 9's; hence, this remainder can be divided by eleven, for 99 can be divided by eleven; hence, the truth of the proposition. Hence, any figure in an odd place in the decimal system will express a multiple of eleven, plus its shape-value; this is proved as the second proposition in the demonstration for nine was proved. Proposition II. *The figure 1 in an even place in the decimal system expresses one less than a multiple of eleven.* This is clear, if the 1 stand in the second place; if it stand in any other even place, there will be some odd number of zeros greater than one, at its right. If one be added to a number thus expressed, the result will be expressed, by two 1's with an even number of zeros between them; a number thus expressed is divisible by eleven, because 1001 is divisible by eleven. It will follow, as in the last proposition, that any figure in an even place in the decimal system will express a multiple of eleven, minus its shape-value. Proposition III. *Every number is a multiple of eleven, plus the sum of the shape-values of the figures in the odd places, minus the sum of the shape-values of the figures in the even places.* This is plain because, applying our postulate, it follows from Principle II, that the sum of all the multiples must be a multiple. And the truth of the test will be apparent, if we remember that, when the sums of the shape-values differ by a multiple of eleven, the whole number must be a multiple of eleven increased or diminished by another multiple of eleven; the result must be a multiple of eleven by Principle II. Illustrations. 8646 is a multiple of eleven, because the sums of 6 and 6 and of 8 and 4, are both 12; the difference of these sums is no times eleven. 362956 is a multiple of eleven; for the sum of the shape-values of the figures in the odd places is 21, and the sum of the shape-values of the figures in the even places is 10; the difference of these two sums is once eleven.

These demonstrations are somewhat long, and difficult for young learners; but I know of no way of making them simpler. For such pupils, the demonstrations should not be attempted; but all pupils should be made perfectly familiar with the tests themselves.

RULE for resolving a number into its prime factors. *Take out of the*

number in regular order all the possible prime factors above one ; and stop when a prime number is reached whose square exceeds the number you are striving to factor. Illustration. Let us attempt to factor 16002. Write the number, placing the sign of equality at its right ; as fast as the factors are found, place them at the right of the sign, and place the remaining number below the first number ; thus, write $16002=$. We see by the tests that the number contains one two and one only ; at the next step, the writing will stand thus $16002=2$.
8001

The number 8001, is seen by the tests to contain two threes ; when they are taken out, the work will stand as in the margin.

$16002=2 \times 3^2$. The number 889 contains no five ; but, on trial, it is found
8001 to contain seven ; when the seven is taken out, the work will
889 stand

$16002=2 \times 3^2 \times 7$. There is no other seven in 127 ; and, by test we find
8001 that it contains no eleven. The next prime number is
889 thirteen, but its square is 169 ; and, if it were possible to
127 divide 127 by it, the other factor must be less than
thirteen. But no such factor is possible ; hence
127 is prime, and the completed work will stand

$16002=2 \times 3^2 \times 7 \times 127$. as in the margin. There can be no more rapid
8001 or complete method of resolving numbers into their
889 prime factors.
127

In some future papers, we may show more fully some of the practical uses of factors and factoring.

E. C. HEWETT.

Nov. 8, 1873.

EDITORS' DEPARTMENT.

This is the close of Vol. VI. An index has been prepared for use in binding the volume. A glance at this table of contents will reassure our friends of the profitable investment of the \$1.50. Although we cannot complain, when we consider the stringency of times, yet we feel like urging our friends to send forward the names of subscribers. During the sixteen years of the publication of the magazine, probably no year has equalled in cost of publication that just passed. Our pecuniary reward has been nothing. We ask the teachers of Illinois to make it something in 1874. The journal shall deserve it.

A letter, in substance like the following, has been addressed to many of the high-school men and superintendents of the state. Replies approving the step have come promptly back. Will all others who read this and who wish to take hold of the matter address Mr. Forbes or ourselves by letter. A meeting of all interested in the movement will be held during the State Association session at Bloomington. Every one is invited. The letter explains itself. Enough have already indicated approval to guaranty the success of the scheme :

"DEAR SIR :—Mr. Forbes and myself have been discussing a plan for a union of our leading high schools for a natural history survey of the State, and wish to submit to you the following proposal. He will put into such schools as will unite for this purpose through their principals and by vote of their boards of education, a set of marine specimens, insects and plants, sufficient to illustrate botany, conchology, entomology, and the study of the lower forms of life, as far as these branches are usually carried in the best high school courses. He will take charge of and work up all desirable specimens sent in next year by teachers and their classes, and will redistribute them among the schools in such a manner as to give to each school participating in the work a full set selected from all the material contributed. He will add to these sets specimens of such kinds as the school cannot collect for themselves, as far as these can be obtained by this museum in sufficient quantities. Of the objects collected by the schools, he will ask to retain one set for the museum, and all duplicates in excess of those required to supply the school cabinets. The work of such a survey could be divided among the different schools of the association in some manner to be determined when a formal organization is had. Does the foregoing plan seem to you promising and practicable? Will you join such an association, and "see us through?" It is proposed to organize at the next meeting of the State Teachers' Association.

Resp.,

AARON GOVE "

In the part of Mr. Boltwood's paper published in our October number, which we omitted, was a valuable suggestion relative to a substitute for industrial education. This recommendation was, that half-time schools be established, or that pupils should be taught their trades and get their education simultaneously.

From the English correspondence of the *Book-Buyer*, we find the following significant statement :

The late government measure, establishing national education as a system in England, has given rise to an immense activity in educational literature to the exclusion probably of other matter. Nearly half the books now published have reference to the requisites of the master, or the scholar, and there is a perfect flood of manuals of history, literature, science, etc., all contending for public favor; for the pecuniary value of a school book to the publisher is beginning to be understood, though the machinery for their introduction and dissemination is very far below the standard of American usage.

In a paper on the sanitary aspects of primary education, read recently by Dr. R. J. Sullivan before the New York Academy of Medicine, an important suggestion occurs in reference to the earliest age at which a pupil should be admitted into our schools. He contends that seven years is a minimum age, not because mental exertion would be injurious to healthy intellectual growth, but because school life under its present hygienic surroundings is very unfavorable to physical devel-

opment. In other words it is to be understood that, although a pupil is capable of reasonable understanding and a limited amount of intellectual development prior to the seventh year, such education should be given it out of school and without the usual restraint. A fact that renders Dr. Sullivan's views valuable is that he was for several years medical inspector of our public schools.

The meeting of the State Teachers' Association is near at hand. The programme will be found on other pages. The arrival of trains in Bloomington is such as to make it convenient for teachers to attend the Monday evening session, and the time of leaving is such that teachers can stay through Wednesday evening's lecture, and by taking night trains arrive at home early next morning. Let there be a full attendance, for the programme demands it. The president's address by J. L. Pickard, *Methods of teaching Latin*, by E. W. Coy; the *Distinctive work of the High School*, by E. C. Smith; the *Importance of teaching elements of Civil Government*, by P. N. Haskell; all will be worth the journey. Then the papers of Profs. Taft and Gastman, and Miss Dunbar, promise a treat. The other names on the programme are among the most eminent in the State. The executive committee have done their part of the work well. Let us do ours. Turn to the programme, read it, and you will make arrangements to attend this annual meeting of the teachers of our own good State.

We have several communications for our "Mathematical Corner," but want of space obliges us to defer them until next month.

We commend Dr. Willard's article in this number, to all teachers and students of ancient and European history.

The series of articles on arithmetic that have appeared in the *SCHOOLMASTER* this year, will be found to contain much that is worth the attention of young teachers. We commend to such, the careful study of the five articles in their connection.

We furnish on other pages, a list of county superintendents recently elected. These new officers hold their office for four years from November, 1873. Their compensation cannot be increased or decreased for the time they remain in office. These officers hold a meeting during the session of the State Teachers Association at Bloomington.

Where a coal oil lamp stands for sometime undisturbed, the oil will cover the outside and aggregate in sufficient quantity at the bottom of the lamp to make a large grease spot, or enough to show an accumulation of several drops. I first supposed that the oil oozed through the glass; the interstices between the glass molecules being sufficiently great to permit the passage of the oil. I now believe this view is incorrect, and that the oil crawls up and over the top of the lamp by surface attraction. Which view is correct? It would be easy to test the matter by sealing a bottle or lamp full of oil and allowing it to stand awhile.

MURRAY.

OFFICIAL DEPARTMENT.

STATE OF ILLINOIS, DEPARTMENT OF EDUCATION,
SPRINGFIELD, November, 1873.

Attention is respectfully invited to the following

NOTES ON THE SCHOOL LAW.

I. *Schedules*.—An impression has obtained, to some extent, that because school funds are now apportioned to districts in proportion to the number of persons under twenty-one years of age, (Sec. 34,) without regard to attendance, it is no longer necessary, or at least not very important, for teachers to keep and furnish schedules. The impression is entirely erroneous. The requirements of the new law on this subject are as imperative as were those of the old; indeed, the language of the act remains precisely as it was, viz: "nor shall any teacher be paid any portion of the school or public fund, unless he shall have kept and furnished schedules as herein directed." (Sec. 52.)

In a school having a Principal and one or more assistant teachers, the Principal may keep the schedule of the whole school, and receive from the treasurer the entire amount due himself and assistants, paying the latter the sums severally due them, and taking their receipts therefor. To enable the Principal to keep the general schedule, each assistant must keep a careful daily record of the attendance, etc., in his own room, in a suitable book or register provided and arranged for the purpose, which should be handed to the Principal at the close of school each day, and these separate records shall be transcribed and entered up by the Principal, in his general schedule daily.

The certificate to such a schedule will need to vary a little from the form given in the school law, (Sec. 53,) to make it accord with the facts. Thus: "That there is now due said C. D., *Principal*, and *his assistants*, as per contract, the sum of — dollars and — cents, and that said *Principal*, and *each of his said assistants* has a legal certificate of good moral character, and of qualifications to teach a common school," etc.

The foregoing remarks apply to graded schools, to schools controlled by Boards of Education, under the provisions of the 80th section of the act, and, in general, to any public free school in which there is employed a principal teacher, with one or more assistant teachers. Each of such schools is in law *one* school, regardless of the number of rooms occupied or teachers employed; and must be so considered and treated by all parties concerned.

As already remarked, school moneys are not now distributed on the attendance certified in the schedules, but the return of scholars to the township treasurer is still, as heretofore, a *condition precedent* to the legal claim of any teacher to any part of any school fund. The language of the statute is: "until such schedule and report shall have been filed, as aforesaid, it shall not be lawful for said treasurer to pay said teacher, or any two members thereof (of the Board of Directors) to draw an order in favor of said teacher." (Sec. 53.)

The directors of every district are peremptorily required to maintain a free school for at least five months in each school year, that is, between the first day of October and the last day of September, and to support the same they have power to levy an annual tax. (Sections 43 and 48.) Compliance with this requirement is essential to the validity of a district's claim to a distributive share of the school fund. It is therefore important to inquire, what is the proper legal evidence that a district has sustained a school for the required length of time? The answer to this question is not left to conjecture. The *schedules* on file in the office of the township treasurer afford the legal evidence required, and that evidence is sufficient and conclusive. (Sections 52, 53, 54.) Hence the paramount importance of having all schedules duly filed with the township treasurer by the time prescribed in the act; that is, "at least two days before the first Monday in April and October." I find no authority in the law for accepting any other evidence that a district has complied with the five-month's requirement, except that furnished by the schedules.

The law forbidding directors to certify schedules of schools taught more than six months prior to the first Monday of any April or October, is still in force. (Sec. 54.)

The meaning is, that all schedules made from April 1 to October 1, must be in the trustees' hands at their October meeting, and all made between October 1 and April 1, must be in hand at the April meeting. This provision must be strictly construed. If, for example, two weeks of school are taught in September, the schedule for those two weeks must be returned to the township treasurer in season for the ensuing October meeting of the trustees. Failure to return such a schedule may chance to cause a district to forfeit its share of the public money, for, in the absence of the schedule, the trustees will be without the necessary legal evidence that school was maintained during those two weeks, without which the district may fall short of the prescribed five months of school.

The schedule is a legal record, and must always *accord strictly* with the facts. To enter, as days taught, holidays or any other days when the school was not actually in session, is to falsify the record and commit a fraud.

2. *School Month.*—The 48th section of the act provides that the directors of each district "shall establish and keep in operation for at least five *months* in each year, a sufficient number of free schools," etc. The 43d section provides that the directors of each district shall be authorized to levy a tax annually "for the purpose of establishing and supporting free schools for not less than five, nor more than nine *months* in each year," etc.

Since the maintenance of schools for the prescribed period, in each year, is a fundamental requirement of the law, and an essential condition of legal participation in the distribution of the school funds, it is important to have an exact definition of the word "month" as used in the above named sections of the act. Such a definition is given in the 54th Section, which provides that "the school month shall comprise twenty-two school days actually taught." This affords a plain and fixed rule by which boards of directors may know what is required of them, and by which boards of trustees may know whether a given district has or has not complied with the law, and become entitled to a share of the public funds. The rule is, that between the first day of October and the last day of September, annually, the schedules of every district must show that the schools thereof were actually in session at least one hundred and ten days. From this number no deductions can be made for intervening holidays or anything else—there must be one hundred and ten days of actual teaching in each and every school year to entitle the district to its proportion of the public funds. By "school days" are meant all days except Saturday and Sunday, and legal holidays.

Must directors, then, in all cases require their teachers to teach twenty-two days to the month? Are they forbidden to contract with teachers upon any other basis? Not at all. They are at liberty, as heretofore, to make any contract with teachers, in respect to compensation and time, that may be acceptable to both parties. They may pay their teachers by the year, by the term, by the month (of such number of days as may be agreed upon), or even by the week or day, if both parties consent thereto; and may enter into any agreement they choose in respect to vacations, holidays, etc., *provided only*, that at least one hundred and ten days are actually taught during the school-year. But if a teacher is simply employed for a certain number of months, at a stipulated sum per month, nothing having been said in the agreement or contract as to the number of days to be taught for a month; in other words, in the absence of any previous understanding or contract between the parties on the subject, the teacher can be required to teach the full legal month of twenty-two days, as defined in the 54th section of the act and Circular 19, current series, is hereby modified accordingly. Hence the great importance of a clear understanding and definite contract between the teacher and his directors, before the school is begun. There should *always* be a *written agreement* signed by both parties in duplicate in which every material point as to the month, compensation, time of payments, vacations, holidays, etc., etc., shall be clearly and explicitly stated. Printed forms for such contracts can be purchased, if desired, for half a dime, and filled up in five minutes; and there is no estimating the trouble that may be saved by having everything "in black and white." Teachers who are too indolent, careless or credulous to take this simple precaution, have only themselves to blame if they get into trouble about their time and pay.

3. *Legal Holidays.*—Section 54 provides that "teachers shall not be required to

teach on legal holidays, thanksgiving or fast days, appointed by State or national authority." The legal holidays in this State are: the *First day of January*, commonly called New Year's day; the *Fourth day of July*; the *Twenty-fifth day of December*, commonly called Christmas day, and any day appointed by the Governor of this State, or by the President of the United States, as a day of Fast, or of Thanksgiving. (Gross Statutes, 3d Edition p. 463 § 15.)

Special attention is called to the fact that only the twenty-fifth day of December, and the first day of January are legal holidays, now; not the week between those dates, also, as was the case under the old law. The statute declares that teachers shall not be required to teach on legal holidays. In virtue therefore of the paramount authority of the general school law itself, all teachers may close their respective schools on those days—no order or formal permission of directors or Boards of Education is required. As to whether a teacher shall or shall not lose the time, that depends upon the terms and conditions of his contract. If there was no previous agreement on the subject, or if he merely engaged to teach by the month at so much per month, the legal month of twenty-two days actual teaching is to be understood, and he can be required to make up the lost time. But by previous agreement and understanding with the directors, or by their subsequent consent thereto, the teacher may be allowed the legal holidays, without loss of time or pay, as explained under the preceding head. In order to avoid misunderstanding, ill feeling and strife in regard to the holidays, the importance of an explicit previous agreement relative thereto, is again urged upon the attention of both directors and teachers.

The question may arise as to the power of directors to grant special holidays, or to allow their schools to be closed on any other days, besides legal holidays. There can be no doubt of their authority to do so, at their discretion. But when such special holidays are not contemplated or provided for in the teacher's contract, he should not lose the time except by his voluntary consent.

The authority of directors in the matter of special holidays, subject to the above condition, is only limited by the paramount requirement of full one hundred and ten days of actual teaching in each year.

Formal schedules are not required to be kept and returned in school districts created by special acts, or in towns, villages and cities having special charter provisions in relation to schools. (See "*Com. Sch. Dec.*" p. 161. *Par. 37 et. al.*)

NEWTON BATEMAN, Supt. Pub. Instruction.

EDUCATIONAL INTELLIGENCE.

ILLINOIS.—*The Southern Normal University*.—It is expected that the building will be ready for use about the first of January; but as there is no appropriation for current expenses, the school is not yet organized. The trustees are Thos. S. Ridgway, Shawneetown, President; James Roberts, Carbondale, Secretary; J. W. Wilkin, Marshall; L. M. Phillips, Nashville; E. S. Russell, Mt. Carmel.

The Southern Insane Asylum is expected to be opened about the middle of December. Due announcement of the time will be made by the Governor. The trustees are: President, Amos Clark, Centralia; Secretary, C. Kirkpatrick, Anna; Treasurer, W. M. Mitchell, Marion; Col. W. R. Brown, Metropolis; J. C. Boyle, Sparta.

Effingham County.—Owen Scott is, as predicted, elected county superintendent by a majority of 403 votes. Mr. Scott very soon after his election took an assistant superintendent, and named her Mrs. Owen Scott. This was done at Effingham at the residence of the bride's mother. With such an addition to the office what county can excel Effingham in the power of its county superintendent?

REPORT OF ATTENDANCE FOR NOVEMBER, 1873.

	No. Pupils Enrolled.	No. of Days of School.	Av. Number Belonging.	Av. Daily Attendance.	Per Cent. of Attendance.	No. of Tardinesses.	No. neither absent or Tardy.	SUPERINTENDENTS.
Cincinnati, O.....	23,834	20	22,460	21,389	95-2	5,106	.....	John Hancock.
Cleveland, O.....	12,949	20	11,931	11,151	93-5	3,863	.....	Andrew J. Rickoff.
Evansville, Ind.....	3,883	20	2,697	3,420	90-3	1,136	928	Alex M. Gow
Peoria, Ill.....	2,627	20	2,465	2,328	94-4	303	.....	J. E. Dow
Springfield, Ill.....	.....	.....	2,037	1,974	97	152	.....	Andrew M. Brooks.
Decatur, Ill.....	1,669	20	1,644	1,468	95-2	271	772	E. A. Gastman.
Rock Island, Ill.....	1,428	23	1,232	1,175	95-5	82	577	J. F. Everett.
Freeport, Ill.....	1,237	20	1,153	1,100	95-4	272	.....	Charles C. Snyder.
West and South Rockford, Ill. }	1,004	20	915	874	95	74	414	{ J. H. Blodgett. O. F. Barbour.
Alton, Ill.....	993	20	882	841	95-3	262	334	E. A. Haight.
East Denver, Colorado	861	20	771	727	94-3	457	338	F. C. Garbutt.
Lincoln, Ill.....	856	20	701	644	91-8	432	195	L. T. Regan.
Ottumwa, Iowa.....	826	20	756	704	93-1	393	253	Wimson Palmer
Macomb, Ill.....	687	20	640	615	96-3	94	362	Matthew Andrews.
Princeton, Ill.....	589	22	553	522	94-1	99	200	C. P. Snow.
Shelbyville, Ill.....	582	20	524	498	95	91	255	Jephthah Hobbs.
Dixon, Ill.....	514	20	478	447	93	477	114	E. C. Smith.
Polo, Ill.....	492	20	437	409	93-8	37	186	J. H. Freeman.
Sycamore, Ill.....	485	20	411	387	94-2	80	276	Harry Moore.
Marengo, Iowa.....	421	20	383	357	92	45	160	C. P. Rogers.
Sandwich, Ill.....	411	20	363	332	91	60	120	A. E. Bourne.
Albia, Iowa.....	409	20	395	380	96-1	18	223	Cyrus Cook.
Rochelle, Ill.....	400	16	357	334	93-6	14	176	P. R. Walker.
E. Champaign, Ill.....	385	23	337	316	93-7	301	60	M. Waters.
Delavan, Ill.....	383	23	347	323	93	197	125	J. S. McClung.
Washington, Ill.....	369	23	349	324	92-8	303	89	R. B. Welch.
W. Mattoon, Ill.....	363	22	323	309	95-4	.....	122	Wm. H. Lanning.
Normal, Ill.....	362	20	342	320	93-2	94	134	Aaron Gove.
Carrollton, Ill.....	360	20	339	324	95-6	88	140	E. A. Doolittle.
S. Belvidere, Ill.....	339	20	284	249	87-7	35	59	J. W. Gibson.
Lexington, Ill.....	318	23	296	284	94	275	74	Daniel J. Poor.
Mt. Carroll, Ill.....	318	20	294	267	90-8	237	90	S. C. Cotton.
Escanaba, Michigan.....	308	20	290	261	90	119	128	N. E. Leach.
DeKalb, Ill.....	282	22	275	250	91	47	83	Etta S. Dunbar.
N. Belvidere, Ill.....	278	23	263	242	91-8	28	110	H. J. Sherrill.
Martinsville, Ill.....	255	22	185	169	91-3	58	45	C. M. Johnson.
Heyworth, Ill.....	171	22	142	123	86-5	139	20	J. E. Jewett.
Lyndon, Ill.....	152	22	136	112	82	38	23	O. M. Crary.
Caseyville, Ill.....	145	20	125	108	87	15	.....	C. A. Singletary.
Ridott, Ill.....	181	20	77	72	93-3	2	44	C. W. Moore.

NOTICE.—These reports must reach us before the 16th of the month to insure publication.

Aurora.—This city is divided by the river into two distinct school districts. That on the west side is under the government of a Board of Education, with Frank H. Hall, as Superintendent and Principal of high-school, and ten assistant teachers. The annual report of this district is before us in the columns of the *Aurora Beacon*. It is to be commended for its completeness. Every taxpayer in that district has but to glance at this report to know of the expenditure of every dollar of school money.

The following extracts from the reports of committees of the Board are full of merit:

"We regard the question of *general supervision* as one of *vital importance*, in any business or profession, where a number of persons are employed, and where unity of purpose and harmony of action, are necessary in order to accomplish the desired results. For this reason we have deemed it expedient to employ additional assistance for the Superintendent by which he is enabled to devote one-half of his time to recitations and the balance to general supervision."

"The labors of Prof. Hall and his class, have added over two hundred specimens of pressed plants and flowers to the herbarium of the school, at a cost for material of \$7 25, and he has

also added to the zoological specimens, over two hundred insects, preserved in an excellent condition, charging for the same the simple cost of materials, \$4.50; while by order of the board nineteen stuffed birds and animals have been added to the same collection, costing the sum of \$19.75 "

" We wish to make especial mention of the efforts of Prof. Hall, the Superintendent, whose earnestness, skill and experience have contributed largely to the success and reputation of our school. His duties are extended and intricate, a part of his time being given to the classroom; a part to general supervision; a part to listening to the complaints and desires of the patrons of the school, and the balance to laying out, systematizing, perfecting and imparting his plans for work in the various departments of the school. The position is a trying one, yet he has held it for the past five years, and we believe he fills it to the entire satisfaction of the people of this district."

The opinion of the Board of Education of West Aurora, is the opinion of the profession in the State; for wherever he is known he has friends.

We notice the salary of superintendent to be \$1,659.75.

Princeton—Bureau County.—William Cullen Bryant has presented Princeton High School with \$500, the income of which is to be distributed yearly in prizes, under the direction of the Board of Education. About 300 pupils are now in the school. The public schools, under charge of Mr. C. P. Snow, are full and flourishing.

Tazewell County.—J. S. McClung with seven good assistants is at Delavan.

The school is working harmoniously and prosperously, with a fair support. Mr. McClung will give to Delavan as good a school as the county ever saw. His record as a schoolmaster is open and all can read.

La Salle County.—This county can congratulate itself on having in its new superintendent, one who will hold the public schools well up to a high standard. Although Mr. Williams has had little experience in county supervision, he is able, zealous and energetic. The Board of Supervisors have fallen in the general decline of Boards and restricted the work of the superintendent.

Cook County—We are obliged to a correspondent for the following story of a visit to the Cook County Normal School :

"A part of the pupils board in clubs at an expense as stated by Mr. Wentworth, of about \$2.50 per week. Efforts are making to erect a boarding house of ample dimensions with fair prospects of success. In the primary room a class was reciting in arithmetic. A problem was given to each pupil in the class. The first pupil then stated her problem, and gave the result; then stepped to the blackboard with pointer and repeated from the number there written the same. Returning to her position in the class, the result was repeated in concert. The first pupil then stated the conclusion, and the next pupil was called.

In the next room we listened to an exercise in reading. The words were first pronounced by the teacher, the class repeating in concert. The teacher reads a paragraph and the pupil reads it after her; the same is then repeated in concert. A number of pupils, selected at random, then read, each making his own selection. The reading was well done. Reading was also in the next room from selections in which pupils had been drilled. This, too, was well executed. The point I note is the amount of *imitation* in reading.

The County Institute was held in this place on the 6th, 7th and 8th of the present month. One hundred and fifty teachers were present.

The programme was closely followed, and all the papers were able and well ren-

dered. Few counties in the State can show teachers of maturer minds or of larger experience.

Dr. Fowler's lecture on the *Teacher's Work*, was practical and suggestive, and given in his own happy way.

Jonathan Piper of Iowa, gave a soul-stirring, mirth-provoking lecture on *Course of Study and School Government*. He will long be remembered by the teachers of this county, and by the citizens of Blue Island.

Our efficient Superintendent, A. G. Lane, was the recipient of most heart-felt sympathy from all the teachers, and many were the regrets at his defeat in the recent election.

Resolutions, highly complimentary to Mr. Lane, and fully endorsing his course for the last four years, were passed at the last session. At four o'clock on Saturday, the teachers met at his office, 173 Randolph street, and there presented him an elegant and costly secretary and chair, accompanied with a neat little speech from H. Merry of Dunton.

Mr. Lane's response was an official farewell to his supporters and co workers. The schools of Cook county are gaining power. Thirty of the fifty-eight suburban towns have a graded course of study.

Mendota.—I visited Mendota not long ago. The schools under the direction of Messrs. Sawyer & McGregor, are in a prosperous condition. Mr. Sawyer claims to have banished all communication from two or three of his rooms wholly on the *voluntary* principle. He is fairly entitled to much credit for this difficult achievement."

Knox County.—*Galesburg*.—Our County has fallen into the current of the times and elected Miss Mary A. West, who is well known to your readers, for County Superintendent. The County Board of Supervisors have just fixed the time and compensation of the County Superintendent at eight days a month and \$4.00 per day. The additional compensation from per centage on public money, may amount to \$250. So however good a person we elect to that office the effect of it upon the educational affairs of the county cannot be immense.

Centralia.—This flourishing garden city of the south prairie of our State appears to have established a permanent system of schools. Mr. W. D. Hall is now there for his second year. It is understood that Dennis can get more work out of a class than any other man in the State. From what little we know of him we are inclined to believe it. With sufficient time he has made, can make, and will make studious and thorough pupils.

Livingston County.—J. W. Smith is still Superintendent, at Pontiac. The schools are larger than ever this year, 513 are now enrolled. Mr. Smith was not elected superintendent; the loss is not his but the county's. He would have made an efficient one.

Sangamon County.—*Auburn*.—Our schools are prospering under the supervision of the following efficient corps of teachers, viz: J. M. Coltas, principal; and Miss Nannie Knott and Mrs. Brownell in the intermediate and primary departments, respectively.

MASSACHUSETTS—*Our New England Letter*.—A merry greeting to New England's sons cultivating the minds and hearts of the little folk in the "Garden State" of the west. There is much of interest stirring the educational centers of your early home, and you can but read with pleasure some of the leading facts gleaned from the surface. Notwithstanding Shakespeare, there is much in a name to charm, particularly when it is the name of an old familiar friend, and there will be a magnet to chain your attention if you see recorded the prosperity of one long known and prized. There have been changes this Fall on a grander scale than our pedagogues have known for a long time, and I venture therefore to ask your indulgence while I chronicle a few personals:

ALBERT C. PERKINS, who is known to your readers by most excellent writing, has been called from the Lawrence high-school, which he had made second to few or none in the land, to the Presidency of Phillip's Exeter Academy, N. H., at a salary of \$4,000.

R. F. LEIGHTON, a rising linguistic teacher and author, has resigned the principalship of the Melrose high-school, at a salary of \$2,500, and sailed for Germany, where he will win fresh laurels.

J. S. BARRELL, a veteran in the ranks, has been called from Lewiston, Me., to Lawrence, at a salary of \$2,500.

A. P. STONE, known through the land for his clear, sharp, bold utterance on all educational questions, has been called from the Portland high-school to Springfield, as Superintendent, at a salary of \$3,500.

THOMAS EMERSON, who has been a leader among the educators of Mass., has left the ranks well crowned with honors. His last service was superintendent of Newton. He leaves a salary of \$3,000 for \$4,000 with Harper Bros.

E. B. HALE, Superintendent of the schools of Cambridge for several years past, has left a comfortable salary of \$3,000, and entered upon the practice of law.

GEO. A. SOUTHWORTH, goes from Malden, Mass., to Somerville, Mass., receiving a salary of \$2,000.

REV. JAMES C. PARSONS, of the Waltham high-school, and a choice teacher too, steps from the ranks.

CHAS. A. CHASE, of Newton, Mass., takes charge of the Woonsocket, R. I. high-school.

CHAS. A. DANIEL, is elected master of the high-school at Malden, Mass., at a salary of \$2,000.

LEVI S. BURBANK, of Lowell, has assumed the control of the Woburn Academy, for the purpose of making it a first-class school of Technology.

HORACE M. WILLARD, leaves the superintendency of schools in Gloucester, for a similar position in Newton, at a salary of \$3,000.

CHAS. S. LAZELL, of New Bedford, takes charge of the high-school in Lawrence, at a salary of \$3,000.

These are a few only, but among the most prominent changes in the fraternity. They are sufficient to establish the principle that promotion is the order of the day. If a man can show himself a first class man in a position at \$1,500, he is sure of being called to a place that pays \$2,000, thence upwards to \$2,500; then out of the ranks into the command as superintendent at \$3,000; then to be called up higher for \$3,500.

This has not been accomplished without a strong, concentrated professional effort.

It was long before teachers felt that they stood as well with a clean record as a shrewd political schemer did without. But, at last, the sky clears and a man stands no chance, for these good places, whatever his political or friendly bearings, if he has not a clean record in the actual work of the school-room. Any man to enter the ranks must start at about \$1,000 or 1,200, and pull his way up by first-class work in his room. The result is that every school is thrilling with a new life; our children are more broadly and thoroughly trained and educated.

Of course, there have ever been disappointed ones, who raise a great hue and cry against the tyranny of the profession; but thus far they have found some fertile spot, and like the Graphic balloon, collapsed.

New Boston.—The most pleasing topic just now is the large additions made to Boston; none are more immediately benefited than the fraternity of teachers. Seven grammar-masters are experiencing the pleasant sensation of an increase in salary from \$2,100 to \$3,200, and the salaries of high-school teachers, sub-masters and lady teachers to the number of four hundred are increased fifty per cent., while other masters go from \$1,800, and \$2,200 to \$2,600. All this is pleasant, as it increases the size of the pool toward which the entire ambition of the teachers of these States tends.

In General.—The educational interests of New England never were more healthy than now; but that is not saying there do not still exist evils with which we must soon grapple. The great heart of our educated community is beating more and more quickly with a growing determination to have some radical changes, but they are changes which in no way affect the improvements already made, and we are content to await the time when the people shall demand that everything connected with the education of youth shall be as high-toned and as truly good as is the present power and influence of our teachers.

Yours heartily,

ALTEN.

SOMERVILLE, MASS., Nov. 1873.

BOOK TABLE.

Education Abroad, and other papers, by BIRDSEY GRANT NORTHROP, LL. D. A. S. BARNES & Co. New York and Chicago, 176 pp.

Dr. Northrop has done an excellent service to the cause of American education, by the publication of this volume. About half the book is occupied with the principal question, that of sending our American youth to Europe, for their education. The author took this matter in hand some months since, and has done much to correct a serious and growing evil; we have already noticed his labors in this direction. Here he gives us the expression of some of the most prominent educators of the country, in addition to his own paper.

The rest of the book contains nine short papers on some of the most important of the living questions of the day. Among them, are "The legal prevention of illiteracy," "The relations of culture and knowledge," "Study and health," "Labor as an educator," etc. The relations of capital and labor are treated in four of these papers; and they are treated with clearness and good sense. We wish what the author says could be read and pondered by every man in America. Especially, should every school teacher study this book, that he may do his part—and it is not a small one—to prevent some of the most serious evils that threaten our country.

An Elementary Geometry, with Practical Applications. A Shorter Course, upon the Basis of the Larger Work, by BENJAMIN GREENLEAF, A. M., Boston; ROBERT S. DAVIS & Co.

We agree with the author in this prefatory statement: "The amount of time usually devoted to the study of Geometry in High Schools and Academies, is not sufficient for the mastery of a lengthy course." We have often felt this pressure, and have been compelled to mark out a shorter course, allowing the class to omit propositions not lying in the chain of direct approach to the climax of the work. We deem this plan better than the closing of the text-book with several of its most interesting and strength-imparting theorems unexamined. Here, within the limits of 170 pages, are presented all the more important theorems and problems,—all that are required for admission to the best colleges in the land. The work is not wholly new, but is a compendium from the larger and well-known work of the author. We are told, however, that the latter will continue to be published. We commend the "shorter course" to the attention of the teachers and text-book committees.

Far too many of our boys and girls leave school without any practical knowledge of the elements of this science. It is somewhat rare to meet a youth who knows how to bisect a given straight line or to draw a tangent to a given circle, or who even knows the meaning of the word circle! Why will not our teachers in the intermediate and grammar schools by oral lessons, impart a few fundamental truths of geometry? We mean, impart some of the *facts* of the science—aid the pupil to form the *conceptions*. These facts and conceptions are easier than those of arithmetic. The reasoning, if it comes at all, must come later.

Choice Trios, a collection of three-part Songs for Soprano and Alto voices, by W. S. TILDEN. OLIVER DITSON & Co., Boston, \$1.00.

This book contains well selected music, not difficult but moderately easy, and yet as the title indicates, choice; an admirable book for our high schools. There are eighty-six trios. The author is musical instructor of the schools of Newton, Mass. He has had much experience in music teaching in schools, and this effort is the result of that experience. It is a good book to buy; it is a good book for the school to own.

Guyot's Physical Geography.—In our review of Guyot's Physical Geography last month, we criticised the placing of the Yak and Chamois among the animals of North America. They are so placed in the copy that we received, but evidently by mistake; for, in later copies, the plate in which they are found is entitled *Animals of the Northern Continents*. Of course, our objection is removed. We forgot also to speak of the excellent questions for review; these questions are admirable, and their insertion adds much to the usefulness of the book.

Oxford's Senior Speaker, by WILLIAM OXFORD, Philadelphia; J. H. BUTLER & Co.

This book of 432 pp. is a valuable addition to the list of *Speakers*. A glance at the list of authors tells the reader that only standard pieces have been selected by the compiler. It is important that our students should memorize for declamation the purest and most elegant English, for many sentences learned in this manner cling to one in later years, and play no small part in forming the expression.

The illustrations (there are ninety), are excellent, and the likenesses the best we ever saw in a book containing so many. We have found this Speaker valuable in class-work in English literature.

(Several notices are crowded out—Printer.)

BOOKS AND PAMPHLETS RECEIVED.

- Cicero De Senectute.* GINN BROTHERS, Boston.
The Voice and How to Use it, by W. H. DANIELL, Boston, J. R. OSGOOD & Co.
History of England, by EDITH THOMPSON, edited by EDWARD A. FREEMAN, D. C. L., New York, HENRY HOLT & Co.
Chicago Report of Schools, J. L. PICKARD, SUPT.
Hagar's Algebra, COWPERTHWAIT & Co., Philadelphia.
Fireside Saints and other Papers, by DOUGLAS JERROLD, Boston; LEE & SHEPARD.
Bureau of Education, No. 4 Circular. List of publications by members of certain College Faculties, and Learned Societies in the United States.
Thoreau; The Poet-Naturalist. ROBERTS BROTHERS, Boston.
Sex in Education. JAMES R. OSGOOD & Co., Boston.
Pronouncing Hand-Book. LEE & SHEPARD, Boston.
Catalogue of Oberlin College for 1873-74.

PERIODICALS.

In our notices of the excellent magazines mentioned below, we have tried to look at them with a teacher's eyes, and to set such things as pertain especially to the teacher's work, in the most prominent place; but we do not forget that other matters than such as we have noticed have no less interest for teachers than for other people. We do not see how the progressive teacher can do without one or more of these magazines; and it will be seen, by reference to our advertising pages, that any one of them can be obtained by a subscriber to the SCHOOLMASTER, at a very liberal discount.

Scribner's Monthly.—We think that this magazine grows more entertaining and valuable, which is saying much. The "Geysers of California" in the October number, and "Old and New Louisiana" in the November and December, both richly illustrated, can be made of great use to teachers of geography; the same may be said of the articles on "Central Park," in the earlier numbers. The "Story of a Telescope," in the November number contains information on the general subject of telescopes and their structure, which is worth more than a year's subscription. The articles on "Culture and Progress," "Home and Society," and "Nature and Science," always give much that a teacher can make practical use of.

The Popular Science Monthly.—The November number contains Prof. Atkinson's Essay, or, "Liberal Culture in the Nineteenth Century," which was read at the late educational meetings in Elmira. It is radical, as all his writings are, but it contains thoughts that educators will do well to ponder. Herbert Spencer's "Psychology of the Sexes" is clear and thoughtful, as usual; but, if Spencer is right, the difference between man and woman is greater than some would have us believe. The October number contains a sharp article on Prof. Agassiz, from the pen of John Fiske. The Scientific Miscellany is always full of things that are both interesting and valuable.

The Galaxy.—The articles which this magazine has published on topics connected with recent history, constitute one of its most striking features. Mr. Gideon Welles's review of Mr. Adams's estimate of Seward as compared with Lincoln, contains much information respecting the two men, from the pen of one who probably knows the truth of what he writes. He clearly shows the utter injustice done to Mr. Lincoln, by Mr.

Adams. Richard Grant White "Punishes a Pundit" in a way that is funny and instructive, at the same time. The Scientific Miscellany is very full, and very valuable. Why will not all the magazines trim the leaves as neatly as the *Galaxy*?

The Atlantic Monthly.—This old favorite does not deteriorate. In mentioning articles of especial interest to teachers, we must speak of Parton's "Recollections of Jefferson," Owen's "Gossip about English Celebrities," and Lloyd's "Home Life" of Mr. Chase. The November number contains an article on "The Railroads and the Farms," which fairly bristles with statistical information; we commend it to our "Granger" friends. The Book Reviews are full and able; they are among the best things in the *Atlantic*.

The Old and New.—There is nothing of more value here than the Editor's practical views on living topics; in the October number, he shows how much we, as a nation, owe to the "town meetings" of New England; we wish every man in the country could read and digest what he says. In the November number, he gives us some of the most sensible things about the "Panic," that we have read anywhere. Four of the leading articles also pertain to the same subject; and they give the views of at least three widely differing parties. The magazine well merits its title.

Saint Nicholas.—This new Children's Magazine from the well known publishing house of Scribner & Co, New York, has put in its appearance. The initial number, November, does not disappoint us, although so much had been said and written of its coming. It is beautiful in illustrations, in letter-press, in matter and in execution. The circulation will inevitably run close to that older and larger monthly from the same house.

Saint Nicholas and the SCHOOLMASTER will be sent one year to one address for \$3.50. Price of *Saint Nicholas* alone, \$3.00

The Little Corporal loses nothing of its brightness and vigor, as the years go by. May it live a thousand years

Our Young Folks is adapted to children a little older than the readers of the *Corporal*. There is no end to Tröwbridge's stories, and we presume their interest for the youngsters is unabated. The illustrations are entertaining and beautiful, in every number.

Oliver Optic's Magazine is suited to boys and girls of about the same age as the last mentioned. Its pictures are especially fine. One young critic that we know objects that there are too many continued stories; and we are inclined to think the point is well taken.

The Nursery.—How Mr. Shorey manages to keep up this magazine for the "wee ones" in the way he does is a profound mystery to us; we can account for it only by saying that he has a genius for that thing, and is undoubtedly the "right man in the right place." But things are surely changed since we were little.

American Sunday-School Worker.—The November number of this journal for Sunday-School Teachers and Parents, announces its terms for 1874. They are so modified that it should increase its circulation, which it richly deserves. It enters upon its fifth year. Being undenominational, it has adaptation to any Sunday School. The Lesson Papers are admirably adapted to promote in the children the study of the Bible. The publisher, J. W. McIntyre, St. Louis, offers to send on application, without charge, sample copies.

TWENTIETH ANNUAL MEETING

OF THE

ILLINOIS

State Teachers' Association,

AT

BLOOMINGTON,

December 29th, 30th and 31st, 1873,

In Durley Hall.

PROGRAMME.

MONDAY, DECEMBER 29th.

- 7:30 P. M.—ADDRESS OF WELCOME, - *Hon. R. M. Benjamin.*
RESPONSE, by the President,
Hon. J. L. Pickard, Chicago.
- 8:00 P. M.—THE PRESIDENT'S ANNUAL ADDRESS.
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TUESDAY, DECEMBER 30th.

PRIMARY SECTION.

In Room 21, High School—J. S. McCLUNG, Chairman.

- 9:00 A. M.—LINE UPON LINE, - *Miss Mary G. Burdette, Peoria.*
GENERAL DISCUSSION.
- 10:00 A. M.—SPELLING, - *Miss L. H. Johnson, Normal.*
GENERAL DISCUSSION.
- 11:00 A. M.—WHAT ARE THE FACTS,
Miss Mary E. Jones, Bloomington.
GENERAL DISCUSSION.

HIGH-SCHOOL SECTION.

- 9:00 A. M.—METHODS OF TEACHING LATIN IN THE HIGH SCHOOL,
E. W. Coy, Hughes High School, Cincinnati.
Discussion opened by H. L. BOLTWOOD, Princeton High School and N. C.
DOUGHERTY, Mt. Morris Seminary.
- 10:30 A. M.—THE HIGH SCHOOL—ITS NECESSITY AND OFFICE,
E. C. Smith, High School, Dixon.
Discussion opened by CHARLES C. SNYDER, Supt. Schools, Freeport.
- 9:00 A. M.—**COUNTY SUPERINTENDENTS' ASSOCIATION.**
In Room 13, High School.

GENERAL ASSOCIATION.

- 2:00 P. M.—A PAPER ON THE IMPORTANCE OF TEACHING THE ELEMENTS OF CIVIL GOVERNMENT,
P. N. Haskell, Hyde Park.
- 2:30 P. M.—CLAIMS OF NATURAL SCIENCE TO A PLACE IN COMMON SCHOOL INSTRUCTION,
Prof. D. C. Taft, Ill. Ind. University, Urbana.

- 4:00 P. M.—AGASSIZ AT PENIKESSE,
E. A. Gastman, Supt. Schools, Decatur.
- 4:30 P. M.—A PAPER—CHARACTER IS POWER,
H. Freeman, Rockford.
- 7:30 P. M.—LECTURE, - *Rev. H. N. Powers, D. D.*, Chicago.
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WEDNESDAY, DECEMBER 31st.

INTERMEDIATE SECTION.

In Room 21, High School—O. F. McKIM, Chairman.

- 9:00 A. M.—ERRORS IN GRAMMAR-SCHOOL WORK AND HOW TO
CORRECT THEM, - *Miss Etta S. Dunbar*, DeKalb.
Discussion will be opened by M. L. SEYMOUR, Blue Island.
- 10:30 A. M.—THE RELATION OF THE TEACHER TO THE PUBLIC,
Supt. S. D. Gaylord, Bloomington.
GENERAL DISCUSSION.

COLLEGE SECTION.

- 9:00 A. M.—A PAPER ON THE DISTINCTIVE WORK OF THE COLLEGE,
Dr. W. G. Eliot, St. Louis, Mo.—Alternate. *Prof.*
W. F. Swahlen, McKendree College.
Discussion opened by Dr. J. M. STURTEVANT, Illinois College, Jacksonville.
- 10:45 A. M.—A PAPER ON THE ECONOMIC VALUE OF SCIENCE-EDU-
CATION, *Dr. O. Marcy*, North-Western University.
GENERAL DISCUSSION.

GENERAL ASSOCIATION.

- 2:00 P. M.—THE PROPER WORK OF THE NORMAL SCHOOL,
Edward P. Weston, Lake Forest.
Discussion will be opened by M. W. SMITH, Sterling, and S. H. WHITE,
County Normal School, Peoria.
- 4:00 P. M.—THE PRESS AND THE FREE SCHOOL,
Hon. F. W. Palmer, Editor Inter-Ocean, Chicago.
Discussion opened by JOHN W. GIBSON, Belvidere, and H. M. RULISON, Durand.
- 7:30 P. M.—LECTURE—SOME FUNDAMENTAL PRINCIPLES,
Dr. D. A. Wallace, President Monmouth College.

ANNOUNCEMENTS.

The County Superintendents' Association, in October, changed its Annual Session to the time and place of the State Teachers' Association.

The College Association this year becomes a part of the State Teachers' Association.

The Hotels of Bloomington will entertain members at the following reduced rates: Ashley House, \$2.50; Phoenix Hotel, \$2.00, and St. Nicholas Hotel, \$2.00 a day.

The Railway accommodations now granted are as follows:

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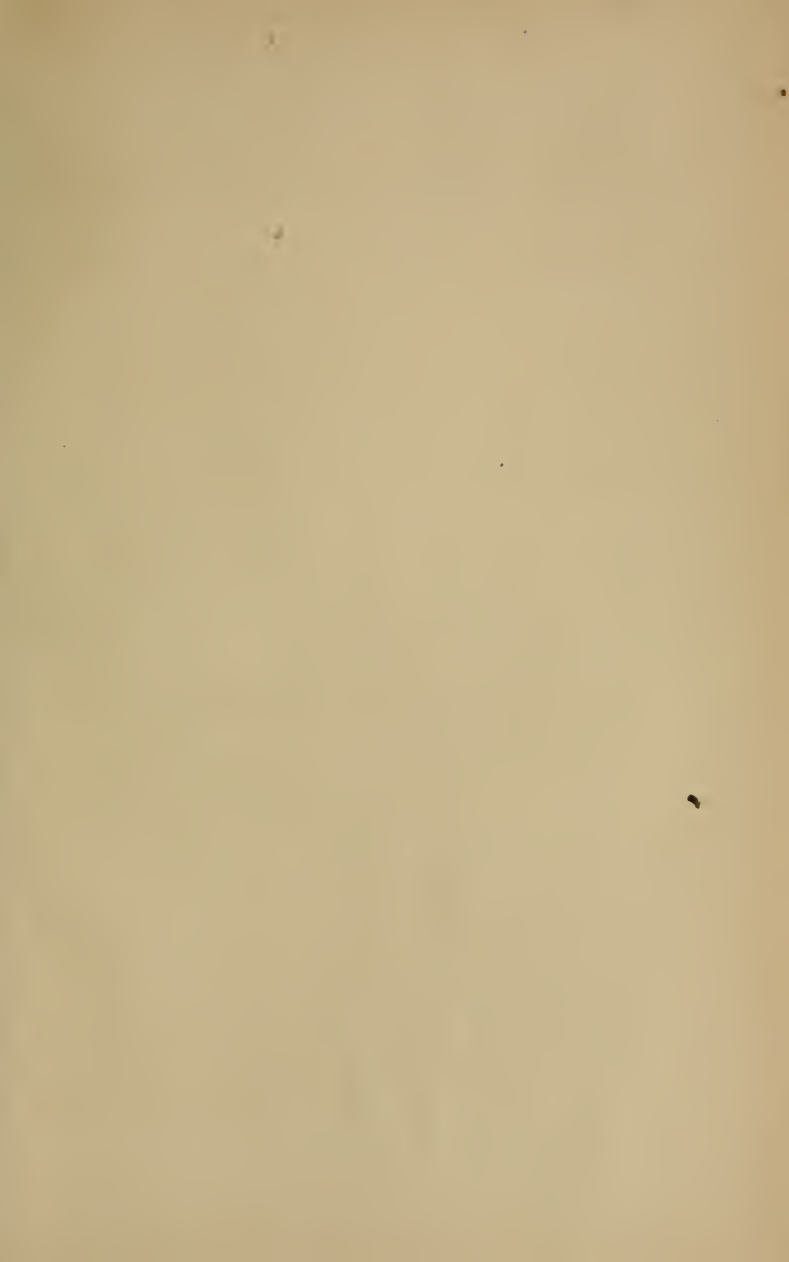
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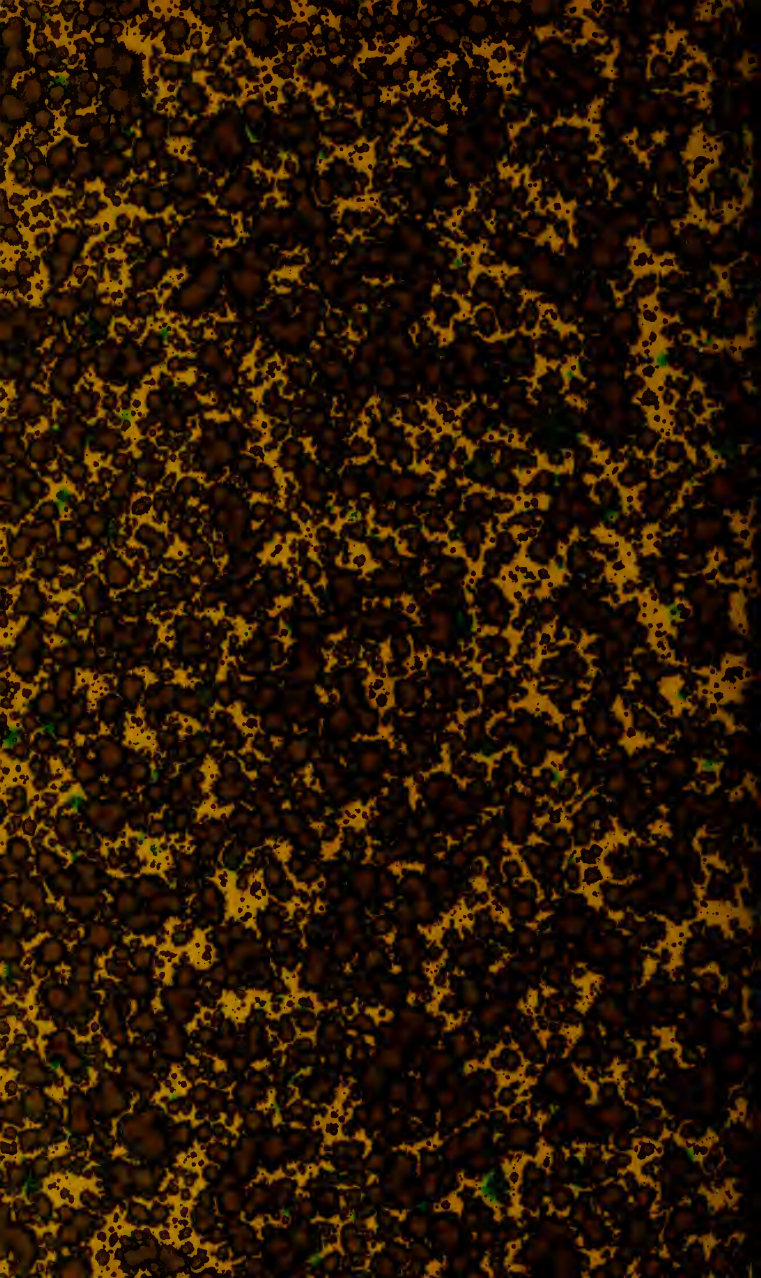
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